

**QUARTER
CENTURY
OF GOODS
VEHICLE
LICENSING**

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**RAILWAY
PROSPECTS
IN SPARSLY
POPULATED
COUNTRIES**

See Page 3

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Freedom and France

CHRISTMAS celebrations were accompanied by numerous reports from Europe and America of probable financial developments in France and elsewhere and, as it transpired, these were realities and not mere dreams engendered by the festive season. In fact, the French Government announced devaluation of the franc by 17.55 per cent, the establishment over the next twelve months of a new franc to be worth 100 of the present ones, and the freeing of 90 per cent of foreign trade from quota restrictions. At the same time Great Britain has established the convertibility of the £ to residents outside the sterling area on an official basis and eight other O.E.C.C. member countries announced that their currencies had been made convertible. The immediate results so far as Great Britain is concerned are likely to remain small, but the possibilities thus created have more moment. It could well become possible in due course to purchase in the cheapest market without regard to currency considerations, and this in turn would have notable implications for export business. At the same time the change in circumstances puts a greater premium on keeping production costs down to the lowest level if competition in foreign markets is to be faced with equanimity. It needs also to be appreciated that conditions could arise wherein the British Government might have to check production and investment for entirely extraneous reasons. Meanwhile the present steps represent realistic reduction of what have often been theoretical procedures to terms of actuality. There may not be as much opportunity as British producers could have wished for benefiting from the abolition of French quotas, and travel agents are still trying to assess the pros and cons of developments across the Channel so far as the tourist industry is concerned.

The Rural Bus

SPEAKING at the annual general meeting of East Yorkshire Motor Services Limited, Mr. J. Spencer Wills, the chairman, confessed it difficult to understand the Government's attitude towards rural bus services. "It cannot be that they fail to appreciate the seriousness of the situation," he said, "because they are constantly drawing attention to the matter themselves; they even published a handbook about it, *The Village Bus*. But there is not one word in that handbook to tell you that more than 10 per cent of an operator's running costs were created by the Government and are entirely artificial. I refer to the 200 per cent tax on our fuel oil. Nor does it tell you that the removal of this tax (which cost our company £91,000 last year) would do very much more to solve the problem than any of the rather hand-to-mouth measures suggested in the handbook." The Government was in fact well aware that one of the major difficulties of the bus business was over-taxation, but so far the industry had received only crocodile tears. "It would be a curious kind of doctor today who prescribed leeches for a patient who was suffering from pernicious anaemia, but that is the Government's treatment for the country's rural services; they are bleeding them to death." The plea for relief made by bus operators before the last Budget resulted only in the application of bigger and better leeches, by increase in the rate of profits tax applicable to utility undertakings.

Crushing Taxation

SINCE profits tax was introduced in 1947 Governments had recognised the special position of undertakings of which the charges to the public were under statutory control, said Mr. Wills; they were either exempted or the obligation was limited to a lower rate, which since 1952 had been 2½ or 3 per cent. To the bus industry's amazement the Finance Bill of 1958 increased the rate to 10 per cent. In the case of East Yorkshire the profit for the year, after tax, was only £10,850 out of a gross revenue of £1 million. Yet in one form or another £163,000 was taken in taxation. After

Current Topics

£91,000 in fuel tax and £20,000 in licence dues there was £52,000 in income tax and profits tax. The last-mentioned figure was larger than it would have been but for the reduction in the intake of new rolling stock and in the consequent allowances. Nevertheless, all that tax must come from one source only, the pockets of passengers. As to income tax, it might be said that it applied equally to all, but it was only part of the truth. For when they came to replace rolling stock it was invariably found, in this inflationary decade, that the cost of the new vehicle far exceeded the original cost of the displaced one, upon which depreciation had been provided and tax allowed. Much of the past "profit" had consequently to be used to

the manufacture of Heinkel cars, agricultural machinery, lorry chassis, general engineering, and a steel foundry, it is now announced that a contract has been secured from C.I.E. for the repair of ex-G.N.R. rolling stock. There is also an order from the Irish Turf Board for 140 narrow-gauge wagons, an order from Portuguese West Africa for eight brake vans, and an order from Iraq for three special carriages and four armoured railcars. This is believed to be the only railway material ever built in Ireland for export, other than Harland and Wolff diesel locomotives and a 2-4-0 steam locomotive built by Grendons of Drogheda in 1855 for Brazil. The 166 Great Northern steam locomotives were divided between C.I.E. and U.T.A. as

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bridge the gap and, since income tax and profits tax had had to be paid thereon, the gross amount required for the purpose in terms of bus revenue had been nearly doubled. From 1954 to 1956 the Government gave an investment allowance at the rate of 20 per cent on new vehicles and 10 per cent on new depots. Shipping still enjoyed them and Mr. Wills suggested it was fully time the allowances were restored for road transport.

The Perpetual Optimist

IT takes a great deal to shake the optimism of Sir William Hildred, director-general of the International Air Transport Association and, as might have been expected, he estimates that the number of passengers on scheduled airlines of the world will approach the 95 million mark in 1959—the estimate for the previous year is 89 million. In addition, the average distance of the air journey will be longer, due to a larger number of non-stop services. Because, however, of the introduction of faster new equipment, including a growing number of turbine-powered aircraft, average speeds would be higher and journey times a good deal shorter. International air traffic as such showed unusual buoyancy during 1958 and proved to be less affected by last winter's unsettled economic and political conditions than had been expected. There was now every indication that the tide of air traffic had recovered its momentum after the slow-down in the rate of increase during the last 12 months. "The next year should see new record carryings in passengers, cargo and mail. Thanks to the growing popularity of foreign travel and the airlines' increasing penetration of the mass market, I am very hopeful that we shall make particular gains in the passenger field," he concluded.

Irish Railway Affairs

FOLLOWING the establishment of the Dundalk Engineering Co., Limited, to take over the overhaul works of the Great Northern Railway in Ireland, and the setting up of five subsidiary companies for

from October 1. Coras Iompair Eireann has 28 4-4-0, 41 0-6-0, 12 4-4-2T, one 2-4-2T and one 0-6-2T, making a total of 83; Ulster Transport Authority took 28 4-4-0, 38 0-6-0, 13 4-4-2T and four 0-6-4T, also totalling 83. The 52 diesel railcars have been split between the two systems, with, in most cases, the even numbers going to C.I.E. and the odd numbers to U.T.A. Thus each party receives four of the new B.U.T. 900 series, eight of the older B.U.T. 700 series, 10 of the A.E.C. 600 series, and four of the pre-war miscellaneous railcars. The one German MAK diesel locomotive is now in the C.I.E. stock. The C.I.E. 0-6-6-0 turf-burning locomotive is in Dublin service between North Wall and Kingsbridge.

Perkins New Venture

NEGOTIATION between F. Perkins, Limited, Peterborough, and the Oliver Corporation, Chicago, has resulted in the acquisition by the Peterborough company of the sole manufacturing and sales rights (except for an existing licence concession in Italy) of a range of three two-stroke petrol marine outboard engines designed and developed by the Oliver Corporation. This is the first of the new products to be introduced by the Perkins division formed in October, 1957, for the purpose. The new engines are of modern enclosed design of 6, 16 and 35 h.p. respectively. They will be manufactured and marketed by a new Perkins company formed specially to handle them. Engines produced at Peterborough in the early part of 1959 will have an appreciable American component content, but this will rapidly be reduced as the specialised machine tools and plant are installed, until the entire production will be English. Although the major outlet will be for pleasure craft, the outboard engine is finding increasing use in working boats and the provision of separate large-capacity fuel tanks, forward-reverse gears and electric starters (on the two larger units) will make the new Perkins engines particularly suitable for application to commercial craft.

Italian Highway Code

MISGIVINGS are being felt—not surprisingly—by Italian road transport operators about the effects on the industry of the new Italian Highway Code, *Codice della Strada*, which includes regulations on the construction and use of commercial vehicles as well as the general regulation of road behaviour. Among regulations being introduced immediately are those on driving licences which will in future be valid for 10 years, except to applicants over 55 years of age, when the maximum period of renewal is limited to five years. Persons over 60 years of age will not be allowed to drive buses or coaches. A speed limit of 50 k.p.h. (31 m.p.h.) in built-up areas applies to all motor vehicles and maximum speed limits of 50 k.p.h. for lorries and 60 k.p.h. (37½ m.p.h.) for public service vehicles are to be strictly enforced everywhere. On main roads outside built-up areas a minimum distance of 40 metres (44 yd.) is to be maintained between vehicles travelling in the same direction. In the case of lorries with trailers this distance is increased to 100 metres (121 yd.). In practice such provisions are probably unenforceable, but they have a pronounced nuisance value. Other regulations contained in the new code affecting commercial vehicles are being brought into gradual operation over the next few years. Foremost among them is the requirement for commercial vehicles of over four tons unladen weight to be equipped with right-hand steering. Many buses and coaches in use in Italy today are already of right-hand-drive design, but the eventual enforcement of the new law will make most existing types of goods vehicle obsolescent. The overall length of the largest types of lorries (six- and eight-wheelers) is to be restricted to 36 ft. 1 in.

John Storer Nicholl

IT is sad that illness clouded the latter days of Mr. J. S. Nicholl, whose death we regret to announce on another page. His passing almost coincided with the twenty-fifth anniversary of the freight vehicle licensing system in the foundations and working of which he played a part. Best known as a pillar of the road haulage industry and as president of the Institute of Transport for a two-year term of office in the 1941-42 and 1942-43 sessions, he was a man of many roles, having had shipping, railway and accountancy experience in his span of 70 years. After working on a railway and as a chartered accountant in Canada he served the Imperial Munitions Board in Ottawa during the 1914-18 war. Later he returned to England, joined Maxwell Hicks and Company, chartered accountants, and so was deputed to run McNamara and Co., Limited, then recently reconstructed, as chief executive officer. In doing this he became imbued with the needs of road motor transport and quickly made his mark in the deliberations of the Commercial Motor Users Association and bodies such as the International Chamber of Commerce. He served on the Transport Advisory Council for nine years and had a hand in moulding road haulage wages machinery and the later structure of the Northern Ireland Road Transport Board, as well as in wartime road haulage organisation and in postwar civil aviation affairs. He devoted much time to the Institute of Transport and its students at a turning point of that body's career and was an enthusiastic member of I.O.T. wartime discussion groups. Nicholl was a clear and constructive, if not always concise, speaker on transport subjects and did much to put transport matters in perspective with public and Government alike. The award of the C.B.E. in 1939 was a just recognition of his work. His devotion to duty was such that he stayed with McNamara to the end under nationalisation, eschewing the invitation from Mr. Alfred Barnes to serve the Road Transport Executive from the start; it was at the end of 1948 that he became chief officer (organisation and development) of that undertaking. He dealt with research and charges for the Road Haulage Executive from 1950 and retired three years later.

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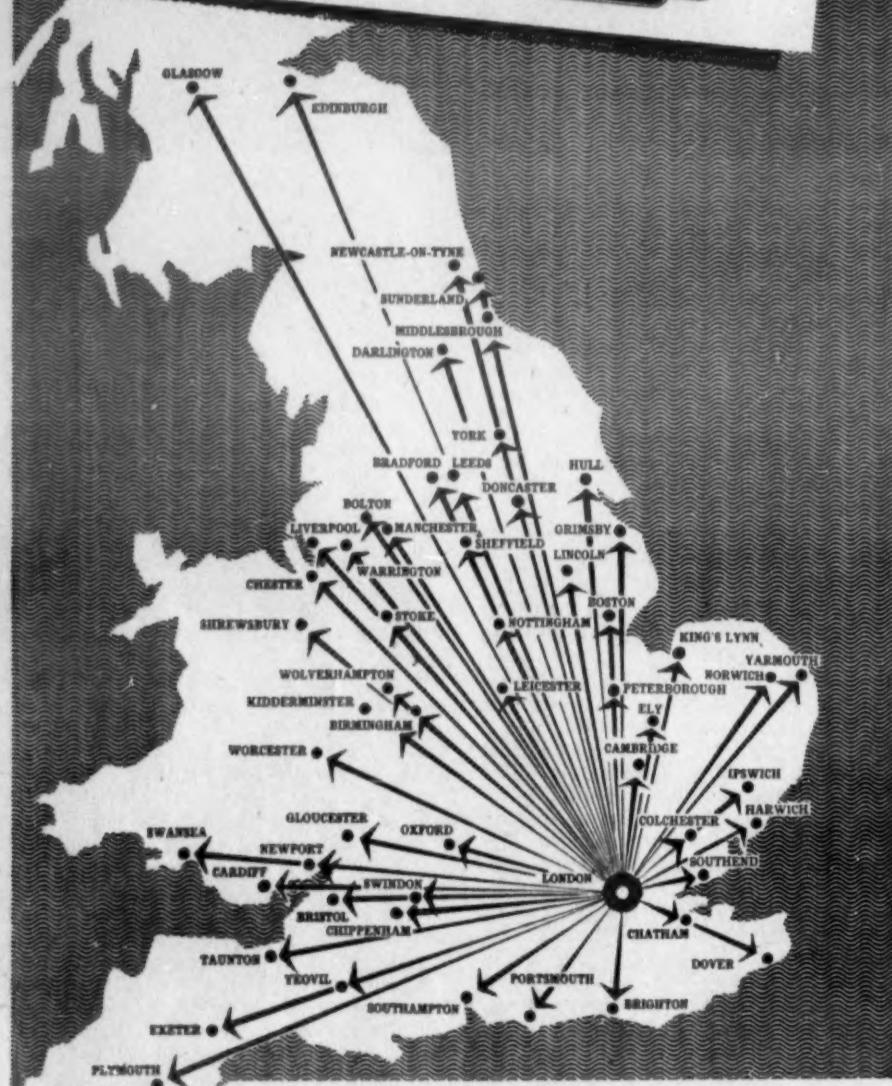
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The Editor is prepared to consider contributions offered for publication in MODERN TRANSPORT, but intending contributors should first study the length and style of articles appearing in the paper and satisfy themselves that the topic with which they propose to deal is relevant to editorial requirements. In controversial subjects relating to all aspects of transport and traffic this newspaper offers a platform for independent comment and debate, its object being to encourage the provision of all forms of transport in the best interests of the community.

Goods Vehicle Licensing— Success or Failure?

JUST twenty-five years ago, on January 1, 1934, to be exact, the goods vehicle licensing provisions of the Road and Rail Traffic Act began to be enforced; a new and exacting era, with plenty of shocks and little in the way of recompense, was ushered in for the road haulage industry. Twenty-five years is quite a long span in its chequered career and the present is by that token an appropriate point at which to take stock. Naturally we have to ask ourselves whether licensing has really achieved the basic objectives which the planners foresaw, or has it been so operated that those objectives were kept within the sights; in short, has it worked, has it truly been made to work? Until we have satisfied ourselves on these points we shall not need to consider the dependent questions, which are: if the system does not work, should there be a select committee or, better still, an impartial inquiry; or should licensing now be relaxed in part or even wholly abolished? Voices have been raised in various quarters seeking inquiries, either specifically in relation to licensing or in the wider context of road transport in its relationship with other forms of transport, also for amendments (usually easements) in the prevailing system. More attention might be paid them if they revealed unanimity on a wide field of criticisms; as it is, one feels uneasily that they merely scratch the surface and that the basic issue is overlooked or avoided. Quite simply it is this: can a licensing system devised as a stepping-stone to the co-ordination of transport function effectively, at least in that form, when co-ordination has been rejected and competition come into its own once more?

Expectations Unfulfilled

THE 1938 Act was devised "for regulating the carriage of goods on roads by motor vehicles," but it provided also for the setting up of a Transport Advisory Council "for the purpose of giving advice and assistance to the Minister in connection with the discharge by him of his functions in relation to means and facilities for transport and their co-ordination, improvement and development." The Transport Advisory Council was one of the recommendations of the Salter Committee, whose 1932 report, following upon those of the Royal Commission on Transport set up in 1928, formed the basis of the Act; in addition to advising the Minister it was suggested that it should work towards "the establishment, if necessary, of a system for publication, and possibly control, of (road) rates." The report urged "the need for a scientific inquiry as to the most economic form of transport for each class of goods" and to inquire also into the possibilities of container transfer. Notwithstanding the report of the T.A.C. on service and rates in 1937 little or no progress was made along any of these avenues of inquiry before nationalisation arrived in 1947 and co-ordination (and the T.A.C. with it) was thrown out in favour of integration. In 1958 integration joined co-ordination in limbo and we were back to where we were before 1938. But we still have a licensing system founded on the notion that road traffic must be regulated (and it was made clear in 1938 that "regulated" meant forced back to the railways) and on a division of function between road and rail.

But Some Results

ROAD haulage vehicles have swelled in numbers and, in the heavier classes, have vastly increased in carrying capacity since 1938; it can therefore be said that the Act succeeded neither in regulating nor co-ordinating. In fact, although proper haulage statistics are wanting, it is obvious that a greater ton-mileage is on offer both to road and rail. This is, of course, no criticism of the industry, which has survived all attempts to strait-jacket it, but it suggests that the licensing system needs to undergo a fundamental rethinking, certainly more fundamental than that reflected in the minor changes in emphasis written into

the 1958 Transport Act. One is led to consider, then, whether the Act has attained any of its objectives. Mention must be made of two of the subsidiary benefits which were envisaged to ensue from statutory regulation—enforcement of drivers' hours and fitness of vehicles. Both are made conditions of carriers' licences and under both heads it can be said that headway has been made, so much so that the responsible haulier is entitled to complain, not of his competitor's underpaid drivers but of the inflated wage packets which they draw as a result of excessive hours of work. This unscrupulous form of competition is still not tackled by licensing authorities with the firmness for which the situation calls. Generally, it may be said that the Act has conferred a moderate measure of security on the established haulier, principally in the negative sense that it is still difficult for the newcomer to squeeze in save in a minor role and it has therefore succeeded in limiting wasteful competition.

Conspicuous Anomalies or Shortcomings

COULD the licensing system have been put to greater effect? In the first place the point could be made that the purposes of the Act have not been fulfilled when additional tonnage is still granted, notably to the smaller operator, on too-flimsy evidence of need. In such cases the discretion of a licensing authority may be stretched to limits; he may, in fact, be forced to fall back upon his general knowledge of the transport situation in his area. The Transport Tribunal has not unreasonably commented in caustic terms on the paucity of evidence put forward in numerous instances. On the other hand, the impression persists that by and large the small man is put through the mill where his larger brethren have similar applications granted with a minimum of fuss. In this respect the system probably dispenses crude justice, for the large operator is known and (usually) trusted by his fellows and his motives are deemed honourable, whereas the thrusting newcomer is suspect. There are those who feel that it does nothing to adjust the supply of transport to demand fluctuating with boom and recession. Where the rise and fall is seasonal it is, or should be, met by the issue of short-term licences. Closer adjustment of supply to demand might be achieved if the industry, including always British Road Services, could bring itself to some sort of agreement for the voluntary laying-up of tonnage, with compensation from a levy fund, at idle periods. A licensing authority is precluded from removing a vehicle from a licence by reason only of temporary fluctuation in business. In at least one other respect licensing has not measured up to the task, and that concerns return loading. An A-licence application normally states the classes of goods which the applicant intends to carry and the areas proposed to be served; rarely, however, is it indicated specifically what the character of return loading (if any) is to be; even rarer, one imagines, does the subject figure in evidence at the public inquiry. The licensing authority is not debarred from consulting his opposite number in the area to which an applicant proposes to run, so as to ascertain the effect on locally based hauliers of allowing in "foreign" tonnage which will be seeking return loads. Without a painstaking check of this character it cannot be accurately said that "facilities in excess of requirements" will not be created at some point or another.

Plenty of Material for an Inquiry

NO survey of this subject could possibly be complete without a reference to the current bugbear of normal user. Originally, an A-licence might be refused if it were shown that the holder had effected a substantial change in the character of his business, i.e. departed widely from his normal user declaration. The 1958 Act threatens that what hitherto could befall him only at renewal may now be visited upon him at any time during the licence currency. Only recently have the authorities applied these new powers in earnest. Small operators in particular fear in consequence that what they conceive to be the inalienable right to carry here, there and everywhere may be progressively whittled away. It is difficult, with the best will in the world, to summon up sympathy with their pleas for a more lenient interpretation. The Transport Tribunal has put the matter in a nutshell: "to treat it [the normal user declaration] as a mere flourish or statement of intention to which no one expects the applicant to adhere . . . is to make the exercise of a licensing authority's discretion a farce . . . If, the authority having decided that the applicant ought to be enabled to do what he says he wants to do, the successful applicant is free to do something else, the whole proceeding is nugatory." The inevitable consequence of this will be more closely drawn definitions of permitted classes of goods and areas to be served; if it tends towards the introduction of a form of route or area licensing in suitable cases that might be an influence for good, provided it reduced competition on the main trunk routes to more manageable proportions. All these matters and others of detail, such as the C-hiring licence loophole; the proper function of contract A-licences; power to subpoena witnesses at inquiries and to award costs to objectors where applicants fail to appear in prosecution of their cases, ought properly to be reviewed. Under what conditions might licensing be relaxed or abolished, save for minor details? Possibly, if the railways, modernised, emerged as so strong a competitor for long-distance freight that the roles were reversed and hauliers left to cry protection. Finally, we have to ask ourselves whether licensing of public road haulage on evidence of need is equitable in a period when the private transport user is setting the pace and calling the tune.

(Forthcoming Events appear on page 7)

RAILWAYS IN DENSELY AND SPARSELY POPULATED AREAS

A Comparison of Their Prospects

By A. G. HALL, C.I.E., M.B.E., B.Sc., M.I.C.E., M.Inst.T., Former Commissioner, Western Australian Government Railways and former General Manager, North Western Railway, India

IN highly industrialised and densely populated areas, the public accepts a complicated and intense road and rail system as a matter of course. The critic of either or both forms of transport does not always appreciate the problems involved in their gradual development over the years or the part each has played in the making of a nation.

Although the value of comparisons between the operation of transport in sparsely populated and intensively developed areas may, at first sight, appear to be doubtful, it is believed that some lessons may be learnt from a consideration of past and present problems where railways have played an important developmental role, in a country of relatively considerable primary industry having a low density of population. Such a country is Western Australia, with which the writer has had some experience.

A Low-Density Area

The state has an area of nearly a million square miles or about one-third of the area of Australia; the population in 1957 was 677,000, of which 372,000 was resident in the greater metropolitan area of Perth and Fremantle. Other large towns are few but their population, added to the above, raises the ratio of town to country inhabitants to a high order. The British flag was raised in 1829 at Fremantle and a great impetus was given to development when gold was discovered in 1885 in the Kimberleys and 1892 in Coolgardie. The first railway was opened in 1879 and construction continued rapidly in the 1890s mainly to serve the new goldfields; agricultural and forestry development requirements dictated the need for further lines and many were built in the early part of this century, bringing the total mileage in recent times to over 4,000, all of 3 ft. 6 in. gauge.

In recent years there has been a rapid development of secondary and manufacturing industry, but the bulk of goods traffic handled by rail still consists of wheat and other grains, wool, other farming produce, fruit, timber, ores and mining requirements. The Australian Commonwealth financial grant for roads is based on both area and population. In this respect Western Australia fares well on account of her great area. There has been an active programme of road development in recent years and the standard of the main and many secondary highways is high.

Cheap Rapidly Built Railways

The pressure for the rapid construction of communications in the early days of Western Australia's development to meet agriculture, gold mining and forestry needs, resulted in railways being laid as cheaply and rapidly as possible and without regard to the principles of economic location. They, therefore, developed as surface lines—many heavily graded—laid down as immediate needs dictated, rather than to a well-ordered plan for the future. As time passed more sections of line were added, sometimes paralleling existing sections only 25 or 30 miles apart, the distance considered a maximum for the delivery of agricultural produce by animal-drawn transport.

There can be no doubt that the engineers in earlier times realised that the provision of surface railways in an undulating country was by no means ideal and expected that as the country developed steps would be taken to regrade or relocate sections to provide better and more economical operating conditions. Unfortunately, the heavy demands on available funds for a country expanding rapidly in population and commerce rendered such modernisation and improvement impossible. Grants for railways had to be considered in the light of public opinion, political expediency and the genuine needs for roads, hospitals, schools, ports, public buildings, town development and other state requirements.

Inadequate Finance

In these circumstances it was not surprising that railway development and modernisation were inadequate through lack of finance; even the normal requirements for maintenance and replacement of worn out assets could not be adequately met and reserve funds on a depreciation basis were non-existent. The true state of affairs was only realised at a time when costs had begun to rise, developing rapidly into an inflationary spiral. The shortage of available finance resulted from two world wars and a serious economic depression, all beyond the control of the governments of the time.

With the advent and subsequent development of the internal combustion road vehicle, the scope of railways has been considerably modified. Except for the important interstate passenger trains or those connecting the bigger cities, passenger traffic by rail has largely disappeared and the system has become virtually a freight railway. Branch-line mixed trains running at slow speeds, involving frequent and sometimes long delays for operational and commercial requirements, can make little appeal to the public. Farms and properties on such lines are of large area and the owners have ample road transport at their disposal. Even the faster and more convenient diesel railcar has not recaptured the lost traffic.

Road Competition

In the field of the transport of heavy commodities there is considerable pressure for the use of road vehicles on the grounds of speed and movement and convenience of door to door deliveries. Governmental regulation of road transport through a Transport Board has kept a reasonable balance between road and rail transport, but is not a popular form of control. The road user feels aggrieved that he cannot suit himself how he carries his products and the railway administration views with disfavour the diversion of traffic which it handled in the past and the evasions of the law which often go undetected, but are well known to exist. The use by a farmer of his own vehicle for a purely nominal delivery of produce legally to justify full load of materials, oils, etc., on the return journey, causes considerable loss of traffic.

The financial aspect of railways in a sparsely

Railway Economics

In lightly populated countries the economics of railway systems must be a constantly recurring problem, presenting considerable difficulty of solution. In Western Australia action has been taken to cease operation on 842 miles of line, in mileage a substantial proportion of the total of 4,100 miles, though much less in terms of traffic volume. Legislation for the eventual removing of the assets is expected to follow. There was the most strenuous political opposition to the action taken, in many cases by those farmers who had been the most serious critics of the railway and many of whom had been consistently pressing for a liberalisation of road traffic control.

The main arguments in favour of line closure were the serious disparity between expenditure and revenue and the high cost of rehabilitating lines, past the economic age and of low standards for modernised locomotives and rolling stock. In effecting closure, a proviso was that traffic from the suspended lines had to be delivered to the nearest operating station so that main-line traffic earnings should not be affected. Certain subsidies in compensation to the farmers affected were sanctioned with a diminishing factor to zero over seven years.

The financial saving effected by such suspension of working over a considerable mileage should not be over-estimated. The light volume of traffic handled on such lines and the infrequency of services mean only a relatively small proportional saving in train-miles, but there is a substantial saving in track maintenance costs and what is equally important, the future heavy expenditure on inescapable renewal of track, bridges and structures, with the concomitant of interest and depreciation charges, is avoided.

Relation of Fixed Costs

Those who have dealt with railway finances are only too well aware of the very high relation fixed or overhead costs bear to the dependent or variable net costs of operation. A railway is, by its very nature and construction, capable of hauling great quantities of goods in heavy train loads; improved signalling, doubling of lines, efficient train control, skilful regrading and relocation and modernised equipment generally can all enable the traffic volume to be stepped up to very high levels. The greater the volume of traffic handled, the more economically can the railway function, the heavy cost of overheads being shared between a great number of users. The converse is unfortunately also the case in the more sparsely populated countries, so that either a reduced number of users will be required to take an undue share of overhead costs in a rate structure which will eventually price the railway out of business or the taxpayer will have to subsidise the losses caused through the application of a more reasonable rating system.

In a country of great distances, in the stages of development, some degree of transport subsidy is to be expected. It is the price to pay for progress, but it must not bear unduly heavily on any section of the community or one generation. Were costs to become static an obvious advantage would be gained by separating the railway system into commercial and development sections, of which the former would be expected to pay its way and the latter would be directly subsidised by a grant which would then be open for all to appreciate and which could be debated in Parliament with a full understanding of its significance. In a period of spiralling costs such a division of costs is obviously impracticable.

No Room for Sentiment

In a hard business world, sentiment and a consideration of the problems of others can find but little place. Every transport operator has a duty to his own organisation but there are surely some aspects of road-rail competition which it behoves all to consider.

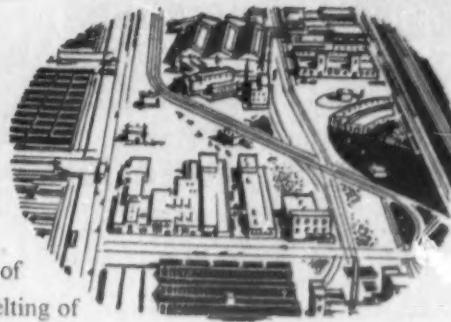
It is generally conceded by all thinking people that both road and rail have their proper places in the world of transport. It was estimated some years ago that in Australia one-third of the total national expenditure was disbursed in transport of one form or another; in other countries the proportion must be of like magnitude so that the elimination of wasteful duplication or competition or reduction of time lost in transit can be of enormous benefit to the community as a whole. Such considerations lead to the conclusion that the regulation of transport must be dealt with as a national problem and not in the light of sectional interests.

Public Foot Transport Bill

Great sums of money have been expended in the building up of railway systems whether the capital involved came from public or private sources. Whatever may be the method of amortisation or repayment the amount at charge at any one time can be very great and heavy interest, maintenance and depreciation charges must be met. When a railway has, in addition, to be reimbursed its losses on operation by Government, the public must foot the bill though the individual taxpayer is unlikely to realise that he is doing so. He frequently will press for greater use of the roads at the expense of the existing railway system, little realising that the greater the success of his efforts, the more he will pay for the luxury of a free choice in the matter. This is particularly true of transport in sparsely

(Continued on page 7)

More



Mining, shipping, the production of hydro-electric power, the smelting of primary aluminium and the production of semi-fabricated products—these are the basic activities of the Aluminium Limited Group of Companies. But industry expects more from us than aluminium—industry expects service and it is service that we offer. Service in terms of research, technical information and advice. Laboratory and field research is the responsibility of a subsidiary company of Aluminium Limited—

than meets



Aluminium Laboratories Limited. This company has extensive research facilities in Canada, England and Switzerland. The head office at Montreal co-ordinates all exploration and geological surveys and develops equipment and plant for all phases of aluminium production.

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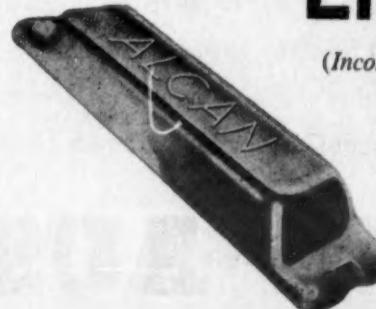
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LORRY—BUS—COACH

Frontal Assault on Treasury

LEADING a purchase tax and fuel tax deputation to the Economic Secretary to the Treasury on Tuesday this week was Mr. J. M. Birch, chairman of the National Road Transport Federation. The deputation included also Mr. R. N. Ingram, representing the Road Haulage Association; Mr. J. Janes, the Traders Road Transport Association and Mr. E. A. Lainson, the Passenger Vehicle Operators Association; Mr. R. Morton Mitchell, secretary of the N.R.T.F. and chief executive officer of the R.H.A.; Mr. F. D. Fitz-Gerald, secretary of the T.R.T.A.; Mr. F. A. Walker, secretary of the P.V.O.A., and Mr. G. Mitchell, assistant secretary of the N.R.T.F. In support of the abolition of the 30 per cent purchase tax on commercial goods vehicle chassis, it was

Transport Executive, had hinted that it might prefer to introduce increased fares to the maximum permitted in stages, but he would not promise that early morning fares might not be taken off at one fell swoop. There would be no general increase in fares in the London area for six months, however; commercial and economic circumstances would guide them in the precise exercise of new charging powers. The inquiry will be resumed on February 3, when the objectors open their case.

L.T.E. Trolleybus Route Economies

FROM Wednesday, January 7, the third and final stage of the large-scale service economies planned by London Transport will come into effect.



Since 1955 the Leicester bus business of Kemp and Shaw, whose Leyland Titan is seen here, has been operated by B.M.M.O., which provides crews; right, this month the business of H. Boyer and Son, Rothley, who operate the Leyland Royal Tiger, is to be transferred to B.M.M.O. The vehicle was acquired from the executors of C. H. Allen, Mountsorrel, whose services passed to B.M.M.O. a few years ago. Mr. Allen was also chairman of Kemp and Shaw

pointed out that this is the only example of a tax on a piece of capital machinery and that it must bear some of the blame for the decline in the production of commercial vehicles from 340,824 in 1955 to 290,122 in 1957. On the case for a reduction in fuel tax it was emphasised that no tax is paid by the railways for the fuel used in their diesel locomotives; that the present excessive tax adds to transport rates and fares and that the cost of transport enters very often several times into the total cost of a finished product. It was also pointed out that the incidence of the fuel tax has led to a severe curtailment of rural services, causing great difficulties to persons living in rural areas.

London Fares Prospect

A GENERAL reserve of £10 million, and an annual contribution to it of £2 million would be reasonable, said Mr. P. G. James, chief financial officer of London Transport, at the hearing by the Transport Tribunal of the application by the B.T.C. for approval of its passenger charges scheme. At present London Transport had no reserve. Earlier, Mr. B. H. Harbour, a member of the London

It concerns trolleybuses exclusively: 22 routes will have reduced frequencies during off-peak hours on Monday-Friday, 20 on Saturday, 25 on Sunday.

Routes 664, 663 and 665 will be withdrawn; 666 will run Edgware-Hammersmith daily; 663 will be extended weekdays to Chadwell Heath; 655 will run to Acton Vale and Clapham Junction at Monday-Friday peak hours only (daily service between Hanwell and Hammersmith); 665 will run daily between Twickenham and Wimbledon.

Liverpool Warehousing Palletisation

ALL long-distance road haulage vehicles had been fully employed throughout the year ended September 30, 1958, but the same could not be said about local business, which had been affected by the reduced volume of traffic offering, it was reported by Mr. R. F. Glazebrook to the annual meeting of the Liverpool Warehousing Co., Limited. Depots in Birmingham and London were playing an important part in the development of the company's road haulage interests. Palletisation had enabled goods to be quickly and economically handled in and out of warehouse. This possibility was foreseen, and it was fortunate that some years ago, before building costs reached their present high

figures, the company embarked upon a programme which incorporated the conversion of a number of older properties from multiple to single storey. At the present time the company had over 40 warehouses available for palletised traffic.

Curtailment of Portsmouth Trolleybuses

ESTIMATES presented to Portsmouth Corporation Passenger Transport Committee for 1959-60 show a profit of £18,450 on buses, compared with a probable surplus of £13,560 on the current year, and a loss of £4,800 on trolleybuses, compared with a profit of £17,175 this year. The estimates are based, it is stated, on the assumption that policy of gradually abandoning the trolleybuses will be implemented and that a proposal that buses should replace trolleybuses on two routes would be carried out at the start of the 1959-60 financial year. This course of action would keep expenditure during 1959-60 to a minimum.

Snow-Clearance Bill in Chicago

TO maintain services during the first 15 days of December, which established an all-time record for low temperatures, the Chicago Transit Authority spent over £90,000 in fighting snow and ice. During this period, C.T.A. lost an estimated 203,000 passengers due to adverse conditions. The temperature averaged only 14.7 deg. F. C.T.A. forces work as a team with snow-fighting units of other public agencies: the City of Chicago, the Chicago Park District, the County of Cook, and the State of Illinois. Each concentrates on specific thoroughfares according to a prearranged plan. During the 15 days in question, when 12.15 in. of snow fell in the city, more than 15,000 tons of salt and sand were spread.

Continental Tours from Tees-side

THE Northern area Traffic Commissioners, at a sitting at Middlesbrough, adjourned until January 20 an application by Mr. R. L. Hardwick, a coach proprietor, of Eston, to run Continental tours from Tees-side to Ostend and Blankenberge in Belgium between Easter and October. It was stated that the cost of the seven-day tours would be 17 and 18 guineas. Mr. J. L. R. Croft, objecting on behalf of several companies, contended that Mr. Hardwick was merely acting as a travel agent. Mr. Hardwick admitted that his coaches would not leave England. Most Continental tours at present started from London which caused inconvenience to the travelling public. His would be a low-priced service.

Bus and Coach Developments

Birmingham and Midland Motor Omnibus Co., Limited, applies for license and timetables of H. Boyer and Son, Rothley. (See accompanying illustration.)

Owing to the continued illness of Mr. Vaughan, C. H. Thomas, Limited, Calne, is taking over the long-established coach business of W. H. Vaughan, Chippenham, on January 3.

Triumph Coaches, Limited, Southsea, which is a Southdown subsidiary, applies for the excursions and tours and express services of Unity Coaches, Limited, Southsea.

The registered office of Tilings Transport (B.T.C.), Limited, which is managed by the Eastern National Omnibus Co., Limited, was moved to 9 Euston Square, London, N.W.1, on December 29.

On January 1 the Western National Omnibus Co., Limited, revised its Taunton town services. Of nine involved only one—224 between Roman Road and Clifford Avenue—retains an unaltered route. For the greater part of each weekday there is a five-minute headway between Parade and the station.

*London Transport Central area weekday bus routes 89A, Lewisham-Woolwich, and 192, Woolwich-Plumstead (Woodlands Estate), will be combined from January 7 under the number 192. The present route of 89A in Woolwich will be diverted from Burrage Road into Anglesea Road and Woolwich New Road to make the through run possible.



Contractors for the 53-mile Luton-Hoo-Rugby stretch are John Laing and Son Limited. Above, at Collingtree, Northampton, giant diggers bite into a 30 ft. bank while an Austin Gipsy on inspection stands by.



CONSTRUCTING—and an Austin tipper delivers dry lean concrete foundation material. When finished, the new road will cover 4,000,000 sq. yds., with 3-lane twin carriageways, 3 viaducts and 150 bridges, flyovers and flyunders. Every 12 miles there will be service stations and restaurants.



14,000,000 cu. yds. of earth will be moved to make the road. 90% of its length will be flatter than 1 in 50. The Austin 5-ton tipper (left) carries 30-40 loads of earth a day, has clocked up 7,000 miles in 3 months. Driver Loveday's verdict: "A very good truck. Comfortable too."



Constant servicing is needed when hundreds of excavating and dumping machines work at full pressure. Welders (right) get busy on the fractured tow-bar of a TD 24 scraper. The welding unit is towed by an Austin Gipsy. Says welder-driver Whitlock: "If we can get round the foreman to lend us the Gipsy we always use her—we know we can get through in her when other vehicles just get bogged right down."

Britain's first Motorway

Austins help to build £20 million highway

ON March 24th, 1958 work began on the London-Birmingham Motorway, Britain's first national highway of this century. Now a broad ribbon crosses the country as the road takes shape. Men and machines are working at full pressure—for scheduled completion date is October, 1959.

Invest in an **AUSTIN**

Free personal benefits for drivers. Ask us for details.

THE AUSTIN MOTOR COMPANY LIMITED • LONGBRIDGE • BIRMINGHAM

A NEW DISTRIBUTION DEPOT

S.P.D. Premises at Nottingham

ONE of the most remarkable features of the new depot of S.P.D., Limited, at Glaistead Drive East, in the western suburbs of Nottingham, referred to briefly in our issue of December 20, is the greatly enlarged cold store provided as compared with earlier postwar depots; this is a reflection of the popularity of frozen foods and is leading to extensions of the frozen food stores at some of the depots previously described in our columns, such as Chelmsford. S.P.D. is, of course, the warehousing and distributing associate of Unilever, Limited; stocks of the well-known brands marketed by companies of the group are forwarded in bulk to the depot by the producing factories. Deliveries are made by S.P.D. to retailers and wholesalers over an area of approximately 1,600 square miles, with a consumer population of 1,738,000, in accordance with orders received from the marketing companies.

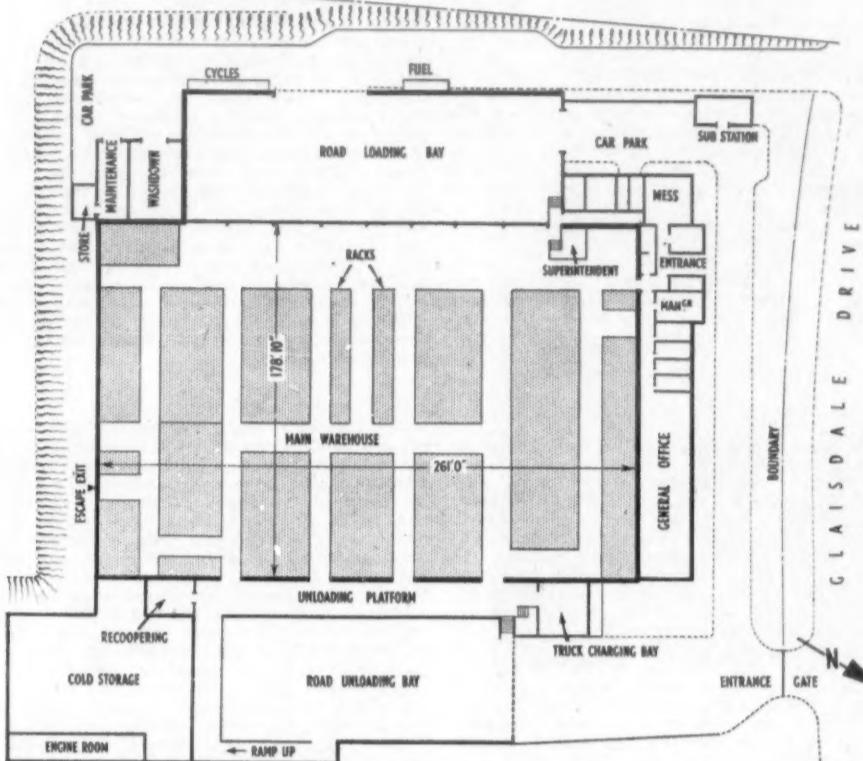
The territory served by the Nottingham depot, which is the 22nd of the company's projected series, includes Mansfield to the north, Southwell and Melton Mowbray to the east, Leicester to the south

from the factories is delivered from the nearby British Railways goods station at Radford, which has been equipped specially to handle palletised loads.

On the west side a covered area alongside the dispatch bank measuring 180 ft. by 60 ft. provides for 16 vehicles to be positioned simultaneously for outwards loading and also furnishes garage accommodation for the depot's distribution vans. These include 18 of 5 to 5½ tons capacity, five of 2½ tons insulated type, one 1½-ton insulated van for sales service and two 5-tonners on contract hire under A-licence. Reinforced floors are provided to permit the entry of pallet trucks over the bridge plates from the loading deck. A 250-ton Birds Eye palletised cold store adjoins the covered area on the eastern side of the warehouse. This is operated by S.P.D., Limited, as part of its service.

Battery Trucks

A re-coopering room, and a battery charging room fully equipped for the maintenance of the electric trucks, are provided adjacent to the road



Layout of the new S.P.D. depot at Nottingham

and Burton-on-Trent and Wirksworth to the west. The premises, which are on an industrial estate 4½ miles from the city centre, have been designed to the requirements of S.P.D., Limited, by Frederick S. Snow and Partners, consulting engineers, and built by Turriff Construction Corporation, Limited; the electrical installation was designed by the Unilever technical division.

Palletisation

The depot has been planned for the palletisation system of unit-load handling, under which, by the use of modern methods of mechanical handling, manual work is greatly reduced. Reduced man-handling of packages also ensures that products reach the customer in first-class condition.

The warehouse is of reinforced concrete column and beam construction with brick and light concrete block infilling, presenting an uninterrupted floor space of 5,186 sq. yd. with a minimum headroom of 17 ft. 6 in. The roof, supported on steel lattice girders, is of aluminium troughed decking finished with insulation board and felt waterproof covering. Main trusses have a span of 178 ft. 10 in. and are considered to be the longest unobstructed span of their kind in the East Midlands.

Ventilation and Lighting

Natural ventilation is employed to maintain warehouse temperatures within the range required for the products stored. Inlet louvres are placed in the walls at low level, and outlet ventilators are fitted in the glazing frames at high level. Natural lighting is provided by means of upstanding roof lights over the main aisles. These lights are double glazed, the top layer being of Calorex glass, which absorbs solar heat.

The floor of the warehouse is surfaced with a 1-in. heavy-duty granolithic concrete laid monolithically on a 6-in. concrete slab. The floor loading capacity is 7 cwt. per sq. ft. The warehouse is 178 ft. 10 in. wide by 261 ft. long. A stacking area representing 61 per cent of the whole has been laid out, aisles and assembly areas comprising the remaining 39 per cent. The centre of the stacking area is equipped with 54 pallet racks of tubular steel and Kee-Klamp construction to the specification of S.P.D., Limited, to take pallets of margarine cartons which cannot, of course, be allowed to stand on top of one another. The standard S.P.D. wooden pallet is a 40 in. by 48 in. full perimeter four-way entry type and 5,600 are allocated to the depot.

Loading and Unloading Banks

On the east face of the warehouse covered facilities are provided for the simultaneous unloading of six inwards road vehicles to a 15-ft. wide platform which serves the warehouse through four 10-ft. square doors. This road intake platform is 140 ft. long. Parking accommodation is also provided for a number of vehicles. Traffic dispatched by rail

inwards platform. Diesel oil and lubricating oils are dispensed from a platform site adjacent to the covered loading area; there are also van maintenance and washing bays. For internal transport there are two high-lift battery fork trucks of the I.T.D. Stacatrac Model 40EH12; a Lansing-Bagnall 2-ton stand-on rider-controlled electric pallet truck with a 6-in. lift; two Lansing-Bagnall pedestrian-controlled PP245 2-ton battery pallet trucks, and three Lansing-Bagnall hand pallet trucks. There is one I.T.D. Portapal Model 40HOP hand pallet truck which is used in the cold store.

The office block is a single-storey building, heated by a low-pressure hot water system, fired by a thermostatically controlled oil-burning boiler. The depot is designed to accommodate approximately 4,000 tons of user companies' stocks and to distribute up to 800 tons (6,250 deliveries) a week or 1,600 tons handled in and out. The staff comprises 32 in management, supervisory and clerical grades, 19 truck operators, warehousemen and cold store staff, and 29 road vehicle drivers and spare drivers. An S.P.D. depot existed in Nottingham from 1920 to 1947; it then had to be moved to Derby but some of the staff continued to live in Nottingham and to them Mr. Ernest Whitaker, transport adviser, Unilever, Limited, who performed the opening ceremony, said "Welcome Home."

NEW YEAR HONOURS

Transport and Industry

As we went to press the list of New Year Honours to be conferred by H.M. the Queen became available. It includes a number of names connected with transport and its allied industries. As chairman of the Dollar Exports Council Sir William Rootes is to be made a baron. Colonel Sir Godfrey Llewellyn, managing director, Neath and Cardiff Luxury Coaches, Limited, receives a baronetcy for his work as chairman of the organising committee of the British Empire and Commonwealth Games held last year at Cardiff. Knighthoods include those for Mr. A. F. Burke, deputy chairman and managing director, de Havilland Aircraft Co., Limited, and president of the Society of British Aircraft Constructors, Major-General C. A. L. Dunphie, managing director, Vickers, Limited, Mr. H. Hull, chairman of the Transport Tribunal, Mr. J. A. Milne, chairman and managing director, J. Samuel White and Co., Limited, and of Island Transport Co., Limited, and Mr. E. J. Pode, managing director, Steel Company of Wales, Limited. Alderman I. J. Hayward, leader of the London County Council and formerly a member of the board of the British European Airways Corporation, is also to be knighted. A further list of names will appear in our next issue.



The fortunate citizens of Edinburgh are in luck again! The City Transport Department follows up their investment in Leyland new-style 'Titan' double-deckers by placing an order for fifty 44-seater 'Tiger Cub' single-deckers. Although based on the design that has put this popular bus way out ahead all over the world, there are some important variations. Power has been stepped up by installing a 110 h.p. underfloor diesel in place of the standard 100 h.p. unit. The well-known Pneumo-Cyclic gearbox (a-pedal control) is coupled with a centrifugal clutch. Automatic chassis lubrication is also an important feature. The bodies will have driver-controlled front doors operated by compressed air, leaving conductor free for fare duties.

These 'Tiger Cubs' are earmarked for city work where they will doubtless follow their usual practice of slicing normal costs pretty drastically . . . and operating with impeccable reliability!

Leyland TIGER CUB
LEYLAND MOTORS LIMITED
Sales Division: HANOVER HOUSE, HANOVER SQUARE, LONDON, W.1. Tel: MAYfair 8561

DISC or DRUM BRAKES



Whatever type
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GIRLING
BRAKE SYSTEM

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Backed by 25 years experience



Cool, comfortable...and quiet!

"Long journey Bill,
...but I'm as fresh
as a daisy!"



The NEW COMMER

DRIVERS enthuse over the new and roomy Commer forward control cab because it is so much quieter. Special insulation damps underfloor, engine noise, at the same time keeping the cab interior fresh and cool, and reducing driving fatigue to a minimum.

AS FITTED TO

COMMER FORWARD CONTROL
4-12 TONNERS
petrol or diesel

ROOTES PRODUCTS — BUILT STRONGER TO LAST LONGER!
COMMER CARS LTD., LUTON BEDS. EXPORT DIVISION: ROOTES LTD., DEVONSHIRE HOUSE, PICCADILLY, LONDON W.I.

3-SEAT COMFORT CAB

OTHER OUTSTANDING CAB FEATURES ARE

- ★ Imposing appearance.
- ★ Ample headroom.
- ★ Splendid visibility through panoramic one-piece windscreen.
- ★ Foam-rubber driving seat fully adjustable.
- ★ Large rear and corner windows.
- ★ Perfectly placed controls.

NEWS FROM ALL QUARTERS

Fell Diesel-Mechanical Locomotive

The London Midland Region locomotive stock alteration list for the period ended November 29, 1958, records that the Fell 4-8-4 diesel-mechanical locomotive No. 10100 has been withdrawn condemned.

Alweg System Rejected by Hamburg

After some six months of private consultation, the Hamburg transport undertaking, the Hamburger Hochbahn A.G., has decided against the introduction of an Alweg railway system in the city. The first intimation that the city had been considering the system was contained in a recent announcement. The reason for the decision is that the supporting pillars would be undesirable in such a densely built-up city as Hamburg.

No-Amber Traffic Light Experiments

The first of a new series of experiments with the omission of the red-and-amber indication from the signal sequence in traffic lights began this week in Leicester. Similar experiments will follow in Wolverhampton, Brighton and Hove, and Northampton. They are designed to eliminate "jumping" of the lights, but observations will be made to see if pedestrians are prejudiced by the lack of warning that traffic is to start. They still have precedence if they are on the carriageway.

Speed Limit on Urban Motorway?

On the ground that it is to be considered as an urban motorway and not a rural motorway, the Minister of Transport is considering the imposition of a 50-m.p.h. speed limit on the inner section of the London-South Wales motorway, which it is proposed should commence as an elevated highway over the Great West Road near the Chiswick flyover. It will be recalled that Middlesex County Council in October objected to the proposed line of route on the grounds that excessive curvatures are involved. Now the county highways committee is prepared to concede that with a definite maximum speed limit the road is safer. Also, its capacity might be increased, according to U.S. experience, from 1,000 to 1,500 vehicles per hour per lane with lower average speeds.

A.E.I. Employment Security Pledge

To increase individual sense of security among its employees with length of service and to give the earliest practicable notification of any change in the prospects of employment, the A.E.I. group has introduced a new redundancy pay agreement. Under it every hourly paid employee, under 65 years of age for men and 60 for women, who normally works the full nationally recognised working week, and who has served the company continuously for three years after the age of 18, will be entitled to one extra week's notice of termination of employment for every two years' total service from the age of 18, in addition to the normal one week's notice, and will normally be allowed one day off to look for work elsewhere in the event of being declared redundant. It is stressed that this agreement in no way foreshadows any fears of redundancy.

New Mersey Bridge at Stretford

Work is about to start on building a new bridge over the Mersey at Stretford as part of a £300,000 scheme to modernise a mile-long section of Chester Road (A57 trunk road). The improvement will start near Dane Road, Sale, and extend northward to the junction of Barton Road and Chester Road in Stretford. Near the middle there will be a roundabout where the trunk road will be joined by the Stretford-Eccles by-pass, now under construction.

Doncaster-Built Electric Locomotives

Now building at Doncaster are 13 2,500-h.p. electric locomotives destined for service on the Southern Region of British Railways. They will be needed when the electrified services to the Kent coast start next June and will be used to haul some main-line freight and certain passenger trains including the *Night Ferry*. The first of these was to be completed this week. This will be the first main-line electric locomotive to be built for British Railways at Doncaster works. With electrical equipment supplied by the English Electric Co., Limited, the new locomotives are being fitted to pick up current from either the third rail or from overhead wiring.

Southern Region Service Economies

Further train service economies were announced by the Southern Region with effect from January 5. Some 12-coach diesel-electric trains on the Hastings-Charing Cross line which are longer than necessary will be shortened in the slack periods to six cars, that is to say, the Hastings-Tunbridge Wells six-coach sets will not be coupled at the latter station to the six-coach sets which have preceded them, stopping at all stations. A number of seasonal steam trains will be withdrawn during the winter months, notably cross-country trains to or from Portsmouth and Bournemouth and a few trains—mainly in the south west—which carry few passengers, even in the summer, will be withdrawn altogether, for the time being at any rate. None of the trains which are being withdrawn regularly carries more than a bus-load of passengers.

Will They Use Explosives?

Red Hall at Bourne, Lincolnshire, where it is thought the Gunpowder Plot of 1605 was hatched, and which now belongs to the British Transport Commission, may soon be demolished. It was once the home of the Digby family, of which Guy Fawkes was a member. The hall has been used in recent years as a booking office, stationmaster's house and dwelling house, but its rent is quite inadequate for maintenance. The Lincolnshire Local History Society has protested against the demolition and stated that it is a matter of great concern that the Commission "should have so little regard for buildings of historic interest." The then Railway Executive approved the transfer of the house without cost to Bourne Urban Council in 1950, but the council found itself unable to proceed and in April this year the Historic Buildings Council withdrew a previous offer of financial assistance.



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EXTRA MILEAGE TREAD
—Precision-balanced rib design increases service because tread wears slowly and evenly. Abrasion resistant rubber compound gives longer wear.

IMPROVED SHOULDER DESIGN
—Maximum protection against curb-scuffing. Deep grooves promote quick dissipation of heat.

SAFETY-TENSIONED GUM-DIPPED CORD BODY
—Tension drying of body cords eliminates tyre growth, tread cracking, and gives positive mating of dual tyres.

WIDER, FLATTER TREAD
—More rubber on the road gives more uniform wear, increases mileage and gives greater resistance to skidding.

RIM-FITTING BEADS
—Stronger bead foundation reduces bead and side-wall failure because excess chafing and flexing are eliminated.

Experience Counts
44 factories throughout the world. Firestone total sales exceed £1,000,000 per day.

Firestone TYRES — consistently good



COMMERCIAL AVIATION

S.A.S. Results for 1957-58

BRITANNIA 253 FLIES

THE annual report of Scandinavian Airlines System shows that total revenues for the fiscal year ended September 30, 1958, amounted to the equivalent of £37.7 million. This compared with total revenue of £34.3 million for the preceding year. Revenue from traffic, after deductions for commissions, totalled £34.6 million compared with £31.75 million and other revenue amounted to £3.1 million. After covering the year's expenses and allowing for regular depreciation costs, a small balance remained that has been set aside for additional depreciation. Total combined costs, including £3.4 million for depreciation, amounted to £37.7 million against £33.6 million for the 1956-57 fiscal year. S.A.S. flew 1,510,000 passengers, 12.8 million kg. of freight and 5.6 million kg. of mail in 1957-58. This compared with 1,396,000 passengers, 11.2 million kg. of freight and 5.2 million kg. of mail. It offered 398 million ton-kilometres and sold 203 million whereas during the preceding 12 months it offered 360 million and sold 180 million.

Eagle and Bermuda Service

Eagle Airways (Bermuda), Limited has announced that a hearing has now been held in respect of landing rights in London following the issue of its operating licence by the Bermudan Government. An initial frequency of once weekly was envisaged between Bermuda and London starting about April 1, at a new creative fare level of £105 return.

Skyways Coach Air Services

Development of the Skyways coach air services and the increasing demand therefore have caused the formation of a separate subsidiary, Skyways Coach Air, Limited. This will be responsible for the administration and organisation of all Skyways coach air services with the exception of that to Vichy or Montpellier, which, for administrative reasons remains the concern of Skyways, Limited. The directors of the new company are Messrs. Eric Rylands (managing) and Charles F. Dickson. This year there will be new services to Dijon and Tours.

Success of Automatic Direction Finder

The only completely crystal-controlled automatic direction finder in production in the world, the Marconi AD712, is reported to be finding favour rapidly. It is at present flying as a dual installation in B.O.A.C. de Havilland Comet 4s, and it is also fitted (dual) in the two Bristol Britannias for Hunting Clan Air Transport. The latter operator has specified similar installations in its three Vickers Viscount 833s due for delivery in 1959. In the near future the AD712 will also be flying in the Vickers Vanguard, the Armstrong Whitworth Argosy and the B.O.A.C. Boeing 707/3.

Silver Arrow Service to Resume

The Silver Arrow coach-air-rail service between London and Paris will be resumed in June, 1959, and run until the end of September, it has been announced by Silver City Airways. It may be recalled that this daily service comprises a coach trip from Victoria Coach Station, London, to Ferryfield Airport, Lydd, where passengers join Silver City aircraft for Le Touquet. After the flight the final section from Etaples to Paris is covered by a diesel train set. Services will leave Victoria for Paris at 09.00 hr. daily, reaching Paris at 16.37 hr. The return journey leaves Paris at 10.27, arriving at Victoria 18.00.

Boeing 720 Simulator for United

The first flight simulator for the Boeing 720s which enter scheduled airline service in 1960 has been ordered by United Air Lines. The simulator will be built by Link Aviation, Inc., of Binghamton, N.Y., and delivered late next year. It will be used for crew instruction at the United flight training centre in Denver, where the company recently installed a DC-8 jet simulator, also made by Link. The simulator will be adaptable for a closed-circuit TV visual system. This device projects a picture of airport runways on a screen in front of the cockpit. The television picture corresponds with the speed, position and altitude at which the simulator is flying.

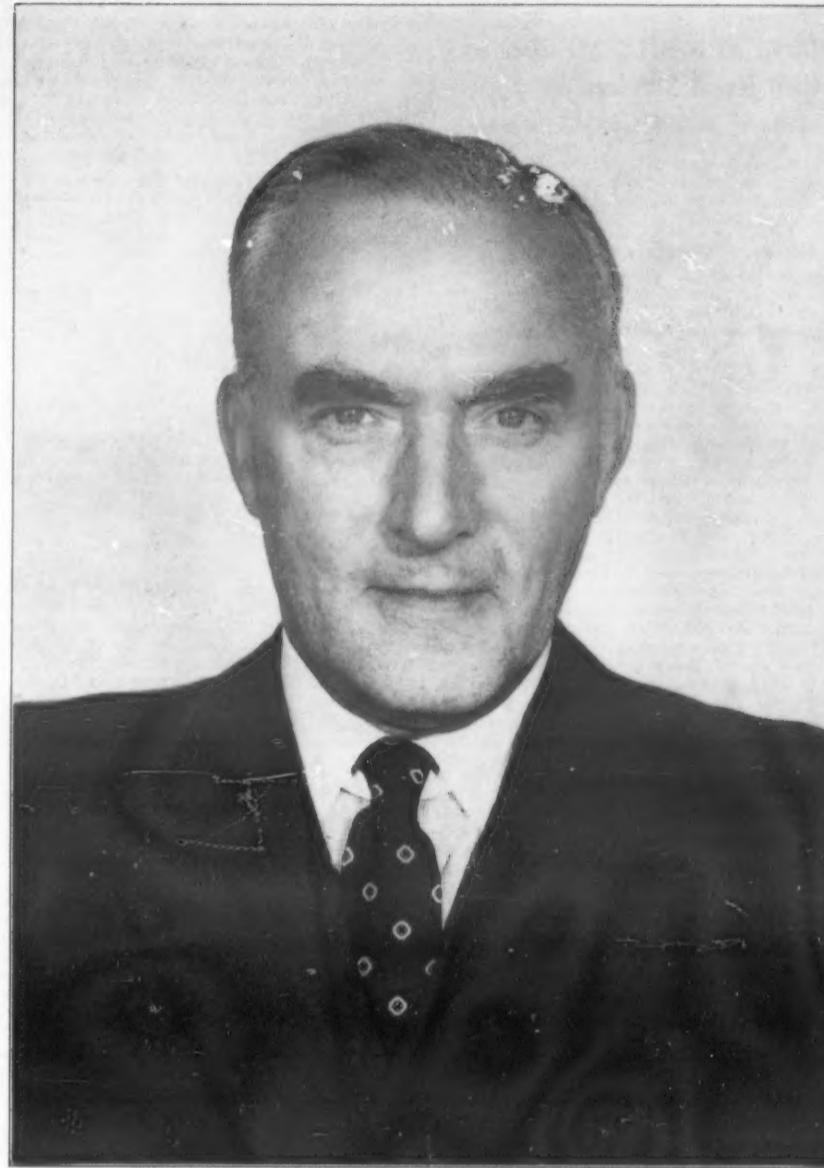
Revised Air Guides

As foreshadowed in its previous edition (MODERN TRANSPORT, December 13) the January A.B.C. World Airways Guide has now had its timetables regrouped and renumbered with consequential improvement in its use for reference purposes. This has involved very considerable resetting work and, temporarily, the very useful maps at the end of the volume do not always coincide with the table numbers. This will, however, be achieved in the March issue. The A.B.C. Air Cargo Guide, which celebrates its first birthday this month, has had a considerable amount of additional information included. The new station directory, additional weights and measures particulars and list of carriers will be particularly useful and many other new features are promised. The A.B.C. World Airways Guide is 12s. 6d. monthly and the A.B.C. Air Cargo Guide, which has now added "and Directory" to its title is 7s. 6d. monthly.

R.A.F. Britannia Makes First Flight

The Britannia 253 military transport aircraft made its maiden flight on December 29 from the Sydenham Airport, Belfast, base of its manufacturer, Short Brothers and Harland, Limited, and was airborne for just over an hour. The aircraft which flew last week is first of a fleet of 20 Britannia 253s which have been ordered for R.A.F. Transport Command by the Ministry of Supply. Of these 15 are being built at Belfast and components for five more, which are to be assembled at Bristol, are also to be manufactured in Belfast. The 253 can carry about 16 tons over 4,100 miles at 400 m.p.h., and has been equipped to give airline standards of comfort for the 115 troops it will be able to transport on long overseas flights. New Short seats can be fitted facing forward or backward and these can withstand a force of 9g. One of the design features of the aircraft is a "floating floor," which allows the loading of heavy military equipment including vehicles and guns. The floor is designed to move in relation to fuselage contraction at high altitude, and so avoid any possibility of fatigue stresses. The engines in the 253 are Bristol Proteus 255 turboprops—a new and more powerful version of the Proteus 755 installed in the long range civil Britannias, and developing 4,445 equivalent horsepower, compared with 4,160 e.h.p.

LONDON MIDLAND CIVIL ENGINEERING



anbutland

Mr. A. N. BUTLAND, O.B.E., B.A., B.Sc.(Eng.),
M.I.C.E.

* * * * *

Following the retirement of Mr. J. Taylor Thompson on December 31, Mr. Arthur Norman Butland has taken up the appointment of chief civil engineer, London Midland Region, British Railways, as already foreshadowed in MODERN TRANSPORT. He had been assistant civil engineer in the same region since 1955. Educated at Truro School, he graduated with first-class honours in Engineering at London University after taking an Arts degree. He joined the staff of the chief engineer, Great Western Railway, in 1924; after six years on the design and survey of steel bridges he was transferred to the divisional engineer's staff at Cardiff. In 1935 Mr. Butland returned to Paddington, and, under the assistant engineer, new works, had charge of the location work and preparation of contracts for a new line in Cornwall. Three years later he became assistant resident engineer, and afterwards resident engineer, for the quadrupling of the line from Greenford to Ruislip in connection with the Central Line extension. During the 1939-45 war he served with Railway Construction and Maintenance Units throughout, and held the honorary rank of lieutenant-colonel in the reserve of officers, Royal Engineers. From October 1 last he returned to the active list of the Engineer and Railway Staff Corps, T.A., with the rank of major. He was awarded an O.B.E. for services in North-West Europe, was mentioned in dispatches, and holds the Emergency Reserve Decoration with first clasp. Mr. Butland was appointed assistant divisional engineer, Taunton, in 1940 and took up this position on his return from the Forces. In 1947 he became assistant (maintenance) to the chief engineer, an appointment covering both permanent way and works, and a year later he returned to Taunton as divisional engineer, moving in 1949 to a similar post at Bristol. He was assistant civil engineer of the North Eastern Region from 1952 until 1955. He is B.T.C. representative on the European Study Circle on Tunnel Maintenance, and last year, as chairman, received the circle in Great Britain.

RUHR REFINERY

Work Starts on Site

NEW B.P. PROJECT

A GROUND-BREAKING ceremony on November 18 marked the official start of work on the new refinery to be built by British Petroleum in the Ruhr area of Germany. The new refinery, which is to be built on a 600-acre site near Dinslaken, some 15 miles north of Duisburg, will have a throughput capacity of 4,400,000 tons a year (100,000 barrels a day). Site clearance has started and the refinery is due to be completed before the autumn of 1960.

A wide range of products will include the highest grade motor spirit, aviation turbine fuels, marine diesels oils, gas oils, fuel oils and chemical works feedstocks. The petroleum chemical feedstocks will be supplied to new units being built for Erdölchemie G.m.b.H., a joint company established by B.P.'s German associate, B.P. Benzin und Petroleum A.G. and Farbenfabriken Bayer A.G. Crude oil for the new refinery will be drawn from the Wilhelmshaven-Ruhr pipeline at present under construction. Some products will be distributed in Rhine barges, for which a harbour is to be built at the junction of the Rhine and the Lippe Seiten Canal, three miles away. Other products will leave by road and rail.

Forthcoming Events

- January 5.—Institute of Transport (Darlington). Paper by Mr. E. McClelland, "Trains—Headways and Margins." At United House, Grange Road, Darlington. 7 p.m.
Institute of Transport (East Anglia). Paper by Mr. F. R. Reeves. At offices of the Eastern Counties Omnibus Co., Limited, Norwich. 6 p.m.
Institute of Transport (Metropolitan). Paper by Mr. D. McKenna, "Work Study and Transport." At 80 Portland Place, W.1. 6 p.m.
January 6.—Institute of Transport (Gloucester and Cheltenham). Paper by Mr. M. G. Cooper, "Some Freight Handling Problems." At Midland and Royal Hotel, Gloucester. 7 p.m.
Institute of Transport (Midland). Paper by Mr. N. P. Burrows, "Road Development in Birmingham." At Exchange and Engineering Centre, Stephenson Place, Birmingham. 6.30 p.m.
South Wales and Mon Railways and Docks Lecture and Debating Society. Paper by Mr. S. C. Harvey, "The Commercial Challenge to the Railways." At Dining Room, Newport High Street Station. 6.45 p.m.
January 7.—Institute of Transport (Leicester). Paper by Mr. J. H. King, "Retail Goods Distribution." At City Transport Offices, Leicester. 7.30 p.m.
Institute of Petroleum. Paper by Mr. G. H. Clark, "Petroleum-Based Launching Lubricants." At 61 New Cavendish Street, W.1. 5.30 p.m.
Institution of Railway Signal Engineers (York). Paper by Mr. P. Wilson, "Developments in Telecommunications with Respect to the Modernisation Programme." At Signalling School, Toft Green, York. 5.30 p.m.
Electric Railway Society. Paper by Mr. T. S. Lascelles, "The City and South London Railway." At 158 Drummond Street, N.W.1. 7.15 p.m.
January 8.—Institute of Transport (Merseyside). Paper by Mr. C. S. Devoy, "Functions of the Port of New York Authority." At Chamber of Commerce, Liverpool. 6.30 p.m.
Institute of Transport (South Eastern). Paper by Lieutenant Commander I. G. Lovsey, R.N., "The Use of Radar at Sea." At Sun Hotel, Chatham. 7 p.m.
Institution of Highway Engineers. Joint meeting with Institution of Structural Engineers. Paper by Lieutenant-Colonel G. W. Kirkland, "Urban Motorways." At 11 Belgrave Street, S.W.1. 5.45 p.m.
B.R. (Western Region) London Lecture and Debating Society. Paper by Mr. G. E. R. Penney, "Modernisation and its Effect on Railway Operation." At H.Q. Staff Dining Club, Bishop's Bridge Road, W.2. 5.45 p.m.
B.R. (London Midland Region) London Lecture and Debating Society. Paper by Mr. E. W. Arkle, "The Customers from the Railway Point of View." At Clerical Staff Dining Club, Cardington Street, Euston, N.W.1. 5.45 p.m.
January 9.—Railway Club. Paper by Mr. T. S. Lascelles, "Safety Measures on Railways." At Royal Caledonian Society. 7 p.m.
January 10.—Railway Correspondence and Travel Society (Sussex and Kent). Annual dinner. At Regent Restaurant, Brighton.

RAILWAY PROSPECTS

(Continued from page 3)

populated areas in which the luxury of two highly developed main transport systems is a very doubtful proposition, but it can also be true in some measure in highly populated countries where both systems are essential for the very existence of the community.

In all countries railways have played a major part in the development of commerce and agriculture. Had the railways received even a small percentage of the wealth they have been instrumental in producing and the land values they have caused to rise, how different would many of their balance sheets and accumulated accounts appear!

A railway system has to operate under severely regulated conditions. Its rating system is usually controlled to a varying degree by legislation; it cannot accept or refuse consignments in accordance with its own preference—a fact which the road user is only too ready to exploit; it is compelled to abide by stringent regulations as to permissible loads and industrial awards; and it provides and maintains at great cost to itself the "road," controlled by expensive safety equipment, over which its traffic passes. It is in this latter respect that increased rail usage can play such an important part in relieving traffic congestion on the road; one has only to enter the London metropolitan area to realise the great disparity in approach speed between road and rail.

Lessons

It seems, therefore, that the lessons to be learnt from the thoughts expressed are as follows:

An integrated railway system, being essential for the needs of the community in most countries, must continue to function whatever may be the cost of operation;

The rates structure should be adequate to meet the cost of operation, including the fixed overhead charges, interest, depreciation and maintenance and a margin of profit for privately-owned lines;

In countries in the stages of development where the above optimum conditions are not possible or in any countries where an adequate rates structure would cause a reduction in traffic, any government subsidy should be open and subject to Parliamentary debate;

A railway must receive due recognition for the public service it gives and be allowed to compete on equal terms with its parallel forms of transport. It must have adequate traffic volume to be reasonably economical. Where sections of railway are an obviously losing proposition there should be no hesitation in removing them, provided the needs of the public can be served by other forms of transport without detriment to traffic earnings on the balance of the railway system.

Should it be felt that the experiences gained on one of the smaller railway systems of the Commonwealth make but a poor basis for comparison with the intense systems of the highly industrialised countries, the justification put forward is that the nature of the problems on a small struggling system are clear for all to see whereas they tend to become obscured and perhaps overlooked in the older-established and fully developed countries.

ROAD HAULAGE SINCE 1933

A Period of Statutory Regulation Surveyed

By G. W. QUICK SMITH, LL.B., F.C.I.S., M.Inst.T., Member of the Board of Management, British Road Services*

TWENTY-FIVE years have elapsed since the passing of the Road and Rail Traffic Act in 1933. This Act served as a landmark in the history of the road haulage industry; it was generally regarded as the industry's charter and it is useful to look back on the course that has been followed since. One is struck with the similarity between the scene as it was then and as it is now. In one respect there was a very big change—then there was a constant clamour for the road haulage to speak with one voice; now the set-up of the National Road Transport Federation has stood the test of 14 difficult years. [Mr. Quick Smith was secretary of the standing joint committee which piloted the merger through in 1945.—Editor.]

A great spur (towards the merger) was provided by the fear that when the war ended catastrophic changes would be imposed by the Government—changes which would (it was felt) involve painful rationalisation if not nationalisation. The reference by Lord Leathers in the House of Lords in October, 1943, to the need for a transport system "so co-ordinated and run that it can provide, and does provide, the best possible service for the least real cost to the community as a whole" and his declaration that "some more radical solution" than the Square Deal proposals had to be found, reinforced these fears. It is interesting to note that the first R.H.A. "fighting fund" was inaugurated at a time when a Conservative Government was in power and then thought likely to continue in power. It is intriguing to speculate as to the pattern the changes would have assumed if a Conservative Government had been returned in 1945. Changes there would assuredly have been—but of what kind must now be anyone's guess!

Wages and Conditions of Service

Another sphere in which there has been a marked change is that of wages and conditions of service. Twenty-five years ago the "good employer" was complaining bitterly of the unfair competition to which he was exposed at the hands of his competitors who failed to pay fair wages. Today, observance of the statutory wages and conditions of service is virtually universal. The 1933 Act contained a fair wages clause but the efforts of the licensing authorities to regulate wages by seeking undertakings from employers came to a sudden end. I suspect because requests for such an undertaking were found to be ultra vires.

Early in 1934 the National Joint Conciliation Board was set up on a voluntary basis together with Area Boards. However, the machinery of the Industrial Court was too cumbersome to bring recalcitrants to book and eventually the unions and certain of the employers' associations joined in

* Abstracts from a paper presented to the Northern section of the Institute of Transport in Newcastle upon Tyne on December 12.

an approach to the Minister asking him to introduce statutory machinery. After a few years' experience it was found that wage-fixing could only be done effectively on a national basis, hence the present Road Haulage Wages Council has no supporting area boards.

Return to Voluntary Negotiations

Ernest Bevin, to whom the industry is so much indebted for the part he played in bringing order out of chaos in those critical days, had in mind that the statutory sanctions would only be necessary for a period of (say) five years and that the industry could then revert to the voluntary machinery which he so much preferred. It is a pity that this hope has not so far been fulfilled. I am one of those who feel that voluntary negotiations are more in keeping with the British tradition. In the 1930s, hauliers who conformed to the prescribed standards of wages were aggrieved by the failure of C-licences to accept the same standards. Today that criticism has disappeared and the position has almost been reversed.

There is a striking contrast with the situation regarding the observance of the statutory provisions relating to hours and rest periods of drivers, speed limits, weight limitations and vehicle maintenance. The operators who default are too numerous for the comfort of the good employer. It is essential that competition should be on a fair basis. The gains that flow from unlawful operation can be of an impressive order and one can only too well understand the temptation to an operator, especially if he is hard-pressed financially. It seems to me that this problem should be tackled with the same vigour as the equally serious wages problem of 25 years ago. There should be a period of strict enforcement in order to purge the industry of this vexatious and damaging trouble and then the time may come when enforcement machinery, whether in this connection or in regard to wages, becomes superfluous.

Conduct of Licence Holders

Until this happy time comes the penalties imposed should be sufficiently heavy to act as a deterrent. In this connection it is interesting to note that the Salter Committee's original recommendations which led to the 1933 Act placed rather more emphasis on the licensing of operators than distinct from vehicles; it was clearly intended that the right to hold a licence should be conditional upon good behaviour in these matters.

The number of vehicles engaged on hire-or-reward activities has increased very little during these 25 years. A-contract vehicles have increased substantially, but these are really analogous to C-licences. The position is entirely different when one looks at the C-licence figures. The overall picture can be seen in an accompanying table of licensed vehicles.

The growth in C-licensed vehicles is no doubt part of the modern trend to "do it yourself." What should be the attitude of public providers of transport, road or rail, nationalised or independent? Their primary task is crystal clear—it is to set out their respective stalls to meet new needs and attract custom in a radically changed situation. Adaptability must be the attribute par excellence of an industry which exists to serve all other industries.

There are of course many advocates of restrictions on C-licences. Others would make C-licences pay a zonal tax, leaving the user entirely free within a certain radius but liable to a gradually ascending tax as the radius of his permitted operations increases. But one must beware of expedites and take care to go to the heart of the problem. Basic-

LICENSED VEHICLES: 1938 AND 1957

	Total 1938 000s	Total 1957 000s	Inde- pendent per cent	National 000s	1957 000s
A	84	92	82	23	29*
A-contract	9	24	23	1	—
B	55	71	71	—	—
C	148	187	156	30	—
	365	1,070	1,068	21	—
	513	1,257	1,224	32	—

* Includes 15,000 B.R. vehicles.

† Includes about 1,000 B.R.S. service vehicles and vehicles on C-hiring arrangements.

The average number of vehicles per licence holder (excluding B.R. and B.R.S. vehicles) is as follows:

	1938	1957
A	3.0	3.4
A-contract	2.2	2.5
B	1.6	2.1
C	2.0	2.0

ally one must be clear as to what exactly the country can legitimately expect of the railways—and then see that they are in a position to perform their proper role. With this settled, road transport falls into its natural place. Whatever the solution, account ought to be taken of the large body of users who operate no vehicles of their own. In the long run the service that they get and the price they are required to pay must inevitably be affected by the degree of freedom enjoyed by the C-licence holder.

Haulage Expansion a Little Easier

By closing the door to newcomers, and requiring proof of need for additional vehicles, the licensing system put a stop to uneconomic expansion of hire-or-reward facilities, as the statistics above clearly demonstrate. The balance of proof of need was shifted by the 1953 Act and the 1956 Act preferred the claims of those persons requiring facilities for transport over those of persons providing facilities for transport. It also required licensing authorities to take into account the relative efficiency, reliability and adequacy of existing facilities as compared with the facilities that the applicant proposes to provide and also relativities of the charges. All these provisions were intended to open the door just a little wider to newcomers and generally to provide a spur to efficiency and economy, but it would appear that in practice these changes have made remarkably little difference to the situation.

The 1953 Act introduced an extremely important new provision, empowering a licensing authority to revoke or suspend an operator's licence if, for the purpose of his licence application, he makes a false statement or makes a statement of

intention or expectation that he fails to fulfil. Hitherto an operator could obtain a licence to meet certain need and then, if a more profitable opening presented itself, use the vehicle for that purpose instead. No ill consequences would follow until (perhaps five years later) the licence came up for renewal.

Normal User

Gone are the days when "general goods, Great Britain" would serve as a sufficient description of "normal user." The use to which the vehicle is to be put must be defined in more specific terms—and failure to use the vehicle normally for that purpose may lead to revocation. This puts teeth into the licensing system with a vengeance and represents a revolutionary change. These are early days to assess the full effect of the new development. Hitherto most changes, though potentially far-reaching, have worked moderately in practice, but it would seem that in this case there is bound to be a radical reorientation.

Has the licensing system worked well? On the whole the answer must be in the affirmative. Once the opposition of the railways to the first licence renewals in 1936 had been overcome, there has been no ground for the original fear that road transport would be completely submerged. It has inevitably been a matter of rough justice rather than a scientific process. Nevertheless it would be fair to suggest that any system which has been in operation for as long as 25 years might usefully be critically and objectively examined by an independent body. One disadvantage of the system arises from the fact that the quantum of licensed vehicles is necessarily geared to peak or near-peak demands. This means that, when the total traffic on offer declines, transport facilities exceed demand and rates suffer in consequence.

Twenty-five years ago rates were as thorny a question as they are today. The 1953 Act adopted the principle of freedom for all in the matter of rates; in considering an application for a licence, the charge to be made as compared with charges made by objectors should be taken into account by licensing authorities. This provision was presumably intended to encourage competitive prices although it could be used to discourage rate-cutting. In fact it appears to have had little or no effect on the situation either way. Haulage rates have certainly not kept pace with the heavy increases in wages and other costs. In the long term it cannot be good for either providers or users of transport for rates to be kept down to an uneconomic level.

Co-ordination of Transport

Co-ordination of transport, an objective of the 1933 Act, was a lively topic in the prewar years. The Transport Advisory Council, set up under the 1933 Act for the purpose of co-ordinating all forms of transport, regarded stabilisation and control of rates as a first essential to co-ordination and the theme was taken up by the road and rail conferences. The philosophy underlying current legislation is that free competition will result in the natural flow of traffic to the form of transport which is technically best suited to carry it. For this to succeed competition must be within the framework of the law and the associated questions of track costs and taxation must be equitably based.

Since the Salter conference the whole situation has changed so radically that fresh thinking is

(Continued on page 10)

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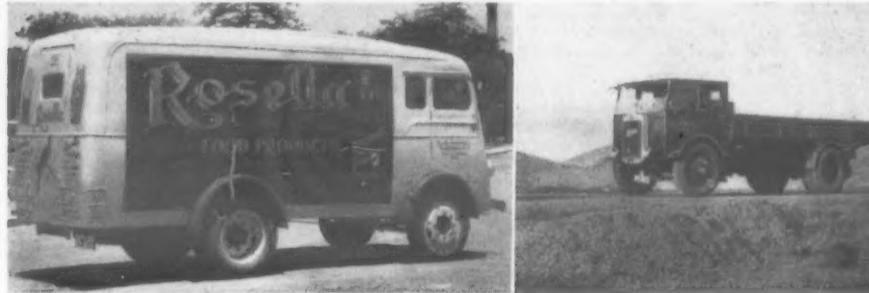
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GOODS VEHICLE DESIGN

Effects of Licensing and Regulation

SINCE it was merely the final step in a series of legislative measures designed to regulate the operation of road transport vehicles, it is perhaps not surprising that the Road and Rail Traffic Act, 1933, part 1 of which introduced the licensing and the operation of most vehicles constructed or adapted for the carriage of goods for hire or reward or for or in connection with any trade or business, had little direct effect on the design of goods vehicles. Perhaps the only direct influence was due to the provision that initially, A or B licences had to be issued as of right to operators in respect of the total unladen tonnage of vehicles in their possession during the year beginning April 1,

the apparent flimsiness of several of the new chassis was the subject of comment by the unenlightened. This arose from the wider use of alloy steels for chassis frames and other components, which permitted appreciable reduction of section and weight. Many of the vehicles on display made use of the fact that the strength of frame sidemembers, for example, increases as the square of the depth and appeared with deeper-section frames of much thinner-gauge material than had been used previously. Other obvious directions in which weight saving made progress at the time was in the wider use of light alloys for crankcase, gearbox and other castings; in the substitution of forged or fabricated



Attractive van body on 2-ton Thornycroft Handy shipped to Sydney, Australia, in 1935; right, a Gardner diesel-engined Foden 6.7 tonner on "Modern Transport" test in Derbyshire in 1932

1932, which emphasised the advantage of vehicles of lower tare weight for a given payload. But even this influence was less than it might have been, as the process of reducing tare weight and improving payload-tare ratios had been progressing for several years in attempts to preserve economic operation in the face of the unbridled competition that had developed with the new haulage industry. These early attempts at weight saving, however, without the protection of established and reputable carriers afforded by the Act, were not generally beneficial since they were dictated by the unstable economy into which the industry was falling. More often than not they provided some immediate advantage at the cost of weakness and low reliability and durability. By providing protection for the established operator, what licensing really did for goods vehicle design

pressed-steel components for the heavy castings previously used in rear axle casings and elsewhere; in the abandonment of torque tubes or rods in favour of Hotchkiss drive; in the wider adoption of hydraulic braking, which saved the weight of rods, cross shafts and compensating gear; and the adoption of bevel gears in the rear axle in place of worm drive.

Lighter Bodywork

The first examples of a lighter type of bodywork also began to appear, though this was perhaps more noticeable in passenger than in goods vehicles. But even in goods vehicles a great deal of deadweight was removed by the use of metal angles and sections in place of heavy timber rails in body framing and of welded pressings instead of heavy forged components used in bodywork. Some chassis



A Dennis 3½-ton lorry with all-steel cab climbing a 1 in 4 hill on "Modern Transport" test in 1933; right, the Albion 4½-ton chassis of 1935 fitted with Duramin cab and A.P.V. 1,200-gal. tank weighed 2 tons 9 cwt. and qualified for 30 m.p.h.

was to provide an economic climate in which the operator could indulge in long-term planning and the vehicle builder could expect a fair price for his products and get down seriously to the problems of design.

Benefits of Licensing

The goal of lower tare weight first started to be energetically pursued after the 1930 Road Traffic Act had introduced its system of vehicle weights and weighing, particularly in the medium-weight class where getting the unladen weight below 2½ tons meant the difference between 20 and 30 m.p.h. maximum legal speed. The Budget of 1933, which substantially increased the annual licence duty payable on the heavier classes of goods vehicle, and the Motor Vehicle (Construction and Use) Regulations issued in 1931 under powers granted to the

manufacturers at about this time started to produce their own cabs and much weight was saved by the adoption of welded all-metal construction instead of traditional coachbuilding methods. In this transition, most of which took place over a very short period—perhaps about two or three years, payload-tare ratios were improved from less than 1 to 1 to better than 2 to 1 in many cases and that this was generally achieved at the same time as increases in mileage between overhauls and improved reliability is to the lasting credit of the motor industry.

Certainly, the improved life and reliability were helped to some extent by the enforcement of maximum weights and speed limits and the better vehicle maintenance under licensing, but the low speed limits of 20 and 30 m.p.h. also had an unfortunate effect on vehicle design. Because officially there



A Leyland Beaver breakdown wagon in the service of the Mersey Tunnel and, right, an A.E.C. Mammoth Major 6 with container body. Both are diesel-engined and of 1933-34 vintage

Minister of Transport by the 1930 Act, each had far more influence on design than the 1933 Act.

Although at the time many of the measures introduced by the whole system of licensing and fiscal enactments were adjudged harsh and unduly restrictive of a growing industry, the effects of some of them at least have proved beneficial in the long term. The grading of taxation rate according to unladen weight and the high level of the duties imposed on the heavier classes of vehicle provided a challenge and an incentive that led directly to the development of a range of heavy goods vehicles with payload-tare ratios that were and, in many cases still are, unmatched anywhere in the world when their reliability and durability are taken into account. In fact, these measures forced the British manufacturer to pay strict attention to efficient design and to the use of higher-strength materials years before the producers in many countries had realised that there were better ways of eradicating a weakness or providing greater carrying capacity than adding a few more hundredweights of metal at appropriate (and inappropriate) points.

The trends of design started by these influences were seen collectively at the Commercial Motor Transport Exhibition of 1933 at Olympia, where

was no case for providing very high speed and with an overriding requirement to reduce unladen weight by all means, there was a tendency to use engines of a lower power output for a given duty than in contemporary foreign designs, a defect from which some British vehicles still suffer to their detriment in certain competitive overseas markets.

Advent of the Diesel

On the other hand, even this restriction had some advantage. The radical changes in vehicle design brought about by licensing coincided by chance with the appearance in service of the automotive diesel engine. In the early development stages the diesel had very high specific weight and bulk and its lower rotational speed necessitated heavier more-complicated transmission to give road performance comparable to that of contemporary petrol engines. For all its great advantage in fuel consumption, without the conditions that allowed manufacturers to get away with a comparatively low road performance it is doubtful whether such concentrated development of the automotive diesel could have taken place in this country. And without that assiduous early development work the incomparable

(Continued on page 10)

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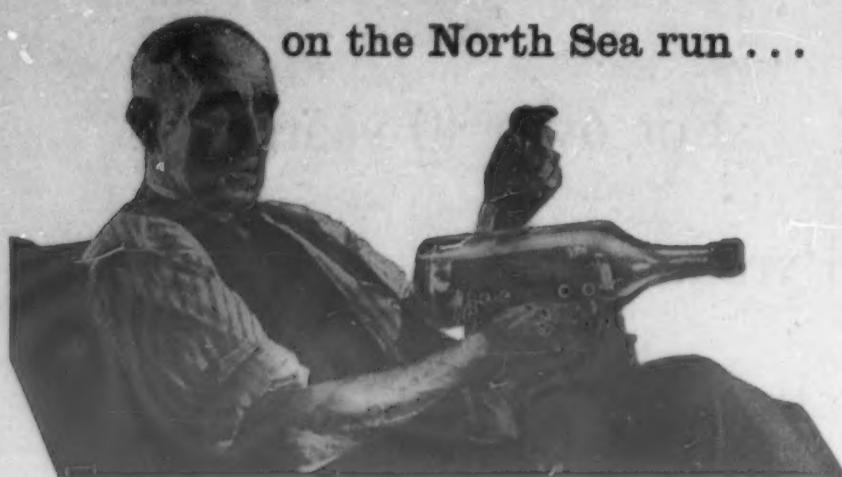
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SINCE 1933

GOODS VEHICLE DESIGN

(Continued from page 9)

British diesel engine might have taken much longer to emerge or might never have appeared at all, which could have deprived the British commercial vehicle of one of its greatest competitive assets.

The diesel engine was certainly not free of development troubles and early examples were frequently accused, not always without justification, of very rough and too-fast idling, foul exhaust and general roughness and noisiness that was extremely difficult to isolate from the rest of the chassis. Neither were all early users convinced that the claims made about fuel consumption were accurate for performance in this and other respects varied widely between different engines. Many of the early makes of automotive diesel were designed around antechamber combustion systems adopted under foreign licence but these soon disappeared and the field was virtually dominated by one make of engine for which a highly efficient open-chamber or direct-injection system had been developed.

Carefully observed tests in the early 1930s showed that the various indirect-injection designs gave 6 to 8 m.p.g. compared with 10 m.p.g. or better from the direct-injection engine doing similar work on the road and most British manufacturers adopted the open-chamber design. The change came at the right time, for the new schedule of taxation on goods vehicles that became effective on January 1, 1934, charged heavier licence duties on diesel-engined than on petrol-engined vehicles. This was done to level out the total tax borne by the two types of vehicle to counteract the difference in the tax on petrol (8d. a gallon) and diesel road fuel (1d. a gallon). Thus the saving in operating the average antechamber diesel was marginal and it took the more efficient direct-injection engine to show advantage in operating cost sufficient to justify the additional initial cost of the diesel.

Engine Mountings and Transmission

An important effect of the change to diesel power was that engine suspension systems quite satisfactory with petrol units left much to be desired with the diesel engine. This led to a great deal more thought being devoted to this aspect of design and much fundamental research was undertaken to determine methods of stress calculations for engine and gearbox mountings before satisfactory designs were evolved. The lower rotational speed of the diesel also brought complication of the transmission system and led to the early development of five- and six-speed gearboxes, overdrive gears and multi-speed auxiliary gearboxes and two-speed axles to offset the disadvantage of restricted speed range. These devices have eventually found their place in providing a wide range of operating characteristics for standardised running units in vehicles designed for different purposes.

A rather unfortunate effect of the adoption of the diesel engine was its inability to idle slowly, due to lack of precision in early fuel-injection equipment, which meant that it was unable to provide dynamic braking to the same degree as the petrol engine. But this defect, too, indirectly produced benefits that have lasted long after the original failing was eradicated. The low level of engine braking with the early diesel made the improvement of wheel brakes essential and hastened the adoption of front-

(Continued at foot of next column)

FREIGHT LICENSING

(Continued from page 8)

surely called for. Receipts from licence duties, fuel tax and purchase tax are currently running at a rate exceeding £500 million per annum. Are road hauliers paying in taxation too much—or too little—towards their track costs? This becomes a critical question in relation to the effect on competition between road and rail—a point that surely demands consideration at times when the raising (or lowering) of the fuel tax is under consideration. It mattered little in the pre-motor age that the railways were responsible for their own track costs, but is this right today? And how is this affected by the switch from tax-free coal to tax-free diesel oil? The time has surely arrived when these questions should be given closer consideration.

Co-ordination a Dead Theme?

More thought was devoted to co-ordination 25 years ago than is given to it today, but little progress has resulted. Is that because it is thought that action in that direction is undesirable or impracticable? Yet 25 years ago a typical observer said that competition, if not kept within reasonable limits by some measure of co-ordination, must result, eventually, in the suicide of the competitors. Have technical developments in transport outstripped the philosophy required to enable all forms of transport to live together in an industrialised country such as ours?

There is one important deficiency which has not been remedied in the past quarter-century—the lack of statistical knowledge about the road haulage industry. Market research would be aided if (for example) we had a clearer picture of what types of work are undertaken by the increasing number of C-licensed vehicles. Consideration of transport problems would be better informed if we had more knowledge of the pattern of freight movements.

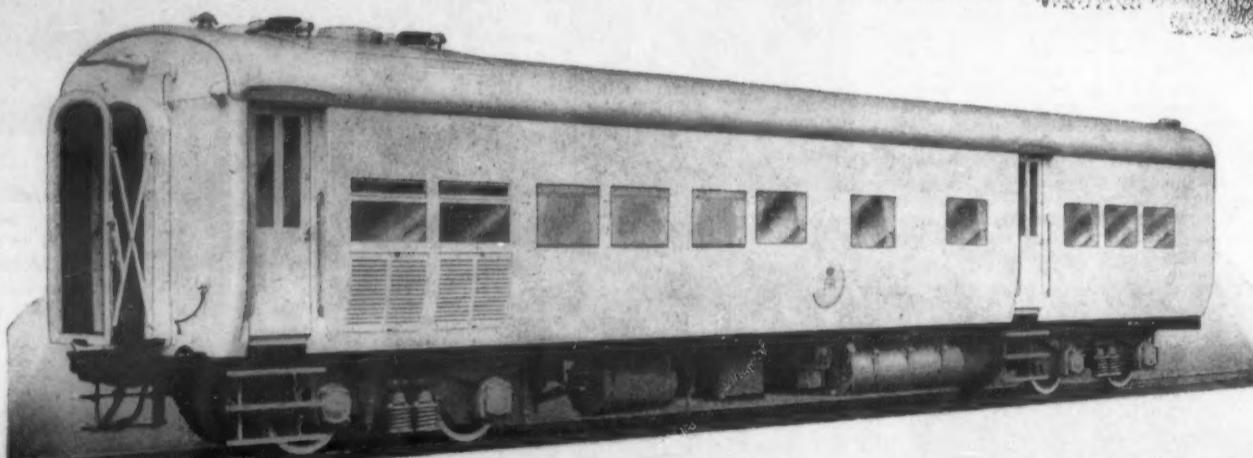
The sample survey undertaken by the Ministry in 1952 was a step in the right direction and it is satisfactory to know that the results of a similar survey taken this year will be known shortly. But this does not go nearly far enough and it seems to me that the Ministry ought to institute an inquiry covering the whole range of statistical information in order to establish what information would be of value to the industry.

(Continued from previous column)

wheel brakes on commercial vehicles and the development of more efficient brake design, lining materials and power servos.

The Construction and Use Regulations as they related to overall vehicle dimensions appear to have been almost wholly retrogressive in their effect, not because regulation was not and is not necessary but because permitted maximum dimensions have been unduly restrictive. These generally have lagged behind current practice elsewhere, even in countries where road widths and traffic congestion make the operation of large vehicles even more difficult than here, and certainly behind what could be permitted with the adequate safety margins of contemporary chassis design. These restrictions generally denied to British manufacturers the ability to compete in many overseas markets with standard home-market vehicles and effectively increased the overall costs of production.

COACHES FOR RAILWAYS IN AFRICA ...

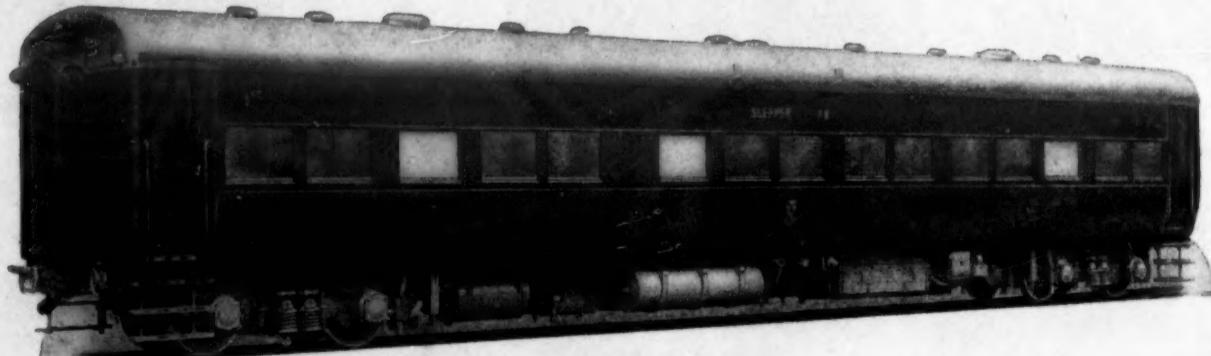


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SOCIAL AND PERSONAL

Death of Mr. J. S. Nicholl

We record with great regret the death, at the age of 70 and after a long illness, of Mr. J. S. Nicholl, C.B.E., M.Inst.T., who was last in the service of the road haulage industry as chief officer (research and charges), Road Haulage Executive. He retired at the end of 1953 but had practised since as a transport consultant. Mr. Nicholl was educated at Sutton Valence, and joined the office staff of the Union-Castle Line in 1904. Subsequently, in Western Canada, he served for a short period as office manager to the chief engineer of the Hudson Bay and Pacific Railway, afterwards qualifying and practising as a chartered accountant. In 1920 he joined Sir Maxwell Hicks, then acting as receiver and manager of McNamara and Co., Limited, and served as chief accountant until shortly after the reconstruction of the company in 1921. He then joined the firm of Maxwell Hicks and Company, chartered accountants and the managers of McNamara and Co., Limited, being designated chief executive officer of the latter. He was appointed to the board in 1940. With the acquisition of McNamara by the B.T.C., Mr. Nicholl joined the Road Haulage Executive as



The late Mr. J. S. Nicholl

chief officer (organisation and development) at the end of 1948 and he assumed the post of chief officer (research and charges) in July, 1950. A member of the Transport Advisory Council from 1934 to 1943, he was intimately concerned in all its activities in relation to road transport. He also served on the expert committee appointed by the Ministry of Labour to advise on the setting-up of wages machinery under the Road and Rail Traffic Act, 1933. In 1938 he was a member of the McLintock Committee appointed to inquire into public transport in Northern Ireland. A vice-president of the former Commercial Motor Users Association, Mr. Nicholl played an important part in the wartime organisation of the road haulage industry, serving as a member of the Road Haulage (Operations) Advisory Committee and other bodies. He was the author of a number of papers on road transport and was awarded the Institute of Transport road transport gold medal for the 1934-35 session. He served as a member of council of the Institute of Transport, 1934-37, as a vice-president, 1937-40, and was president of the Institute for the 1941-42 and 1942-43 sessions. He was awarded the C.B.E. in 1939.

* * *

With the January, 1959, issue, *Trains Illustrated* has an enlarged page size of 9 in. by 6 in. enabling a better display of photographs.

* * *

Mr. Eric Merrill, M.B.E., deputy director of public relations, Ministry of Defence, is to be chief public relations officer, B.T.C., as from January 19.

* * *

The Municipal Passenger Transport Association announces that the next annual meeting of the managers' section will be held at Lincoln on April 29 and 30.

* * *

A paper "Road Development in the Overseas Territories" is to be presented by Mr. R. S. Millard, Ph.D., M.I.C.E., head of the tropical section of the Road Research Laboratory, at a meeting of the Royal Society of Arts on January 15.

* * *

The B.T.C. has approved the establishment of a board of management for the Hotels and Catering Services. Mr. F. G. Hole, general manager of the division, will be chairman of the board; the other members are Messrs. E. K. Portman-Dixon, chief of restaurant cars and refreshment rooms, E. J. Vacher, chief hotels manager, and W. Harris-Burland, director of accounts and statistics, B.T.C. Mr. T. H. Baker will be secretary to the board.

* * *

The annual carol singing by staff of the London Midland Region of British Railways was held in the Great Hall of Euston Station on December 23, 1958, before an appreciative audience on the galleries and concourse. The conductor was Mr. George Kirby and the service was introduced by the Rev. Richard Tatlock, rector of St. Dunstan-in-the-East. Part of it was broadcast and as usual a collection was made for toys for children's hospitals.

* * *

Mr. G. W. French, divisional shipping manager at Southampton, Southern Region, B.R., and Mr. H. Duval, traffic manager of the Angleterre Lorraine Alsace (A.L.A.) company at Dunkerque, retired at the end of 1958. The Southampton and Weymouth marine divisions have now been amalgamated. Mr. W. G. Salmon, divisional shipping manager, Weymouth, has been appointed to take charge of the combined division as divisional shipping manager, Southampton and Weymouth.

I.C.C. Tribute to Transport Chairman

M.R. MARSDEN did an immense amount of valuable work which industry in this country should recognise. There is no doubt that in the immediate postwar period the development of transport and transport facilities owed much to his energy, initiative and wise counsel." This tribute was paid to Mr. A. G. Marsden, former transport adviser to the board of Unilever, Limited, by Mr. J. L. S. Steel when presiding last month at a meeting of the executive of the British National Committee of the International Chamber of Commerce. Stating that Mr. Marsden had played a most prominent part in the work of the I.C.C. in the field of transport over a period of 20 years, Mr. Steel said that for seven years he had held with distinction the chairmanship of its Commission of Transport Users and for nine years had presided over the B.N.C. technical committee on general transport. The B.N.C. executive committee decided to place on record an expression of its gratitude for the services rendered by Mr. Marsden.

* * *

The death is announced of Miss D. Garner, a founder of Garner's Buses (Bridge of Weir), Limited, near Paisley.

* * *

We record with regret the death of Captain D. F. Macmaster, who was assistant operations manager (flying), Qantas Empire Airways. He was 46.

* * *

Mr. H. Gardner, for the past two years a representative in the Chelmsford area, has been appointed the commercial vehicle manager for the south of England for the Dunlop Rubber Co., Limited.

* * *

Sir Cyril Musgrave is to succeed to the chairmanship of the Iron and Steel Board in February when the present chairman, Sir Archibald Forbes, retires. Sir Cyril Musgrave is Permanent Secretary to the Ministry of Supply and has spent 40 years in the Civil Service.

* * *

The appointment of Mr. Tarleton Winchester as European general manager of the United States Lines became effective from January 1. Mr. Winchester succeeds to the premier European post with United States Lines after many years as European passenger manager and more recently as deputy European general manager.

* * *

Mr. D. I. R. Muir, O.B.E., who this week took up the duties of Metropolitan Traffic Commissioner and Licensing Authority, succeeding Brigadier R. J. O. Dowse, was previously an Assistant Secretary in the Ministry of Transport and Civil Aviation.

He entered the Indian Civil Service in 1928 after being educated at George Watson's College, Edinburgh University and Oxford. He served in various capacities in the Indian Civil Service, including notably being Secretary to the High Commissioner for India in South Africa and as joint Secretary to the Government of India (War Department). In 1947 he joined the Ministry of Civil Aviation and since the merger of that Ministry with the Ministry of Transport had served in various capacities, including being in charge of the vehicle regulation and taxation division.



Mr. D. I. R. Muir

* * *

Sir Henry Spurrier has been appointed chairman of Albion Motors, Limited, in succession to the late Sir Jackson Millar.

* * *

Mr. S. Hattan, M.Inst.T., will in future be known as transport controller of Schweppes, Limited, parent controlling the Schweppes group of companies.

* * *

Mr. C. D. Heckman has been appointed assistant to the managing director of the Goodyear Tyre and Rubber Co. (Great Britain), Limited, relinquishing his former position of manager, Goodyear aviation products division.

* * *

Mr. R. J. W. Rudkin, B.Sc., M.I.N.A., general manager of the Naval Yard, and Mr. A. L. White, M.B.E., general manager of the Palmers Hebburn Works, have been appointed additional directors of Vickers-Armstrongs (Shipbuilders), Limited.

* * *

Mr. George S. Leslie, traffic manager of the Central S.M.T. Co., Limited, has retired. He joined the company in 1932, upon its reconstruction from the Glasgow General Company for the purpose of consolidating bus operation in Lanarkshire.

* * *

Mr. A. H. Croxton, chief superintendent of transportation, has been appointed principal executive officer (movement), Rhodesia Railways, which is one of two posts ranking immediately below that of deputy general manager. Mr. J. G. Fawcett becomes chief superintendent of transportation, vice Mr. Croxton.

* * *

The Prime Minister attended the Christmas luncheon at the Great Western Royal Hotel, given by the general manager and officers of the Western Region of British Railways to former directors of the Great Western Railway—of whom Mr. Macmillan is one—and the chairman and members of the Western Area Board of the British Transport Commission.

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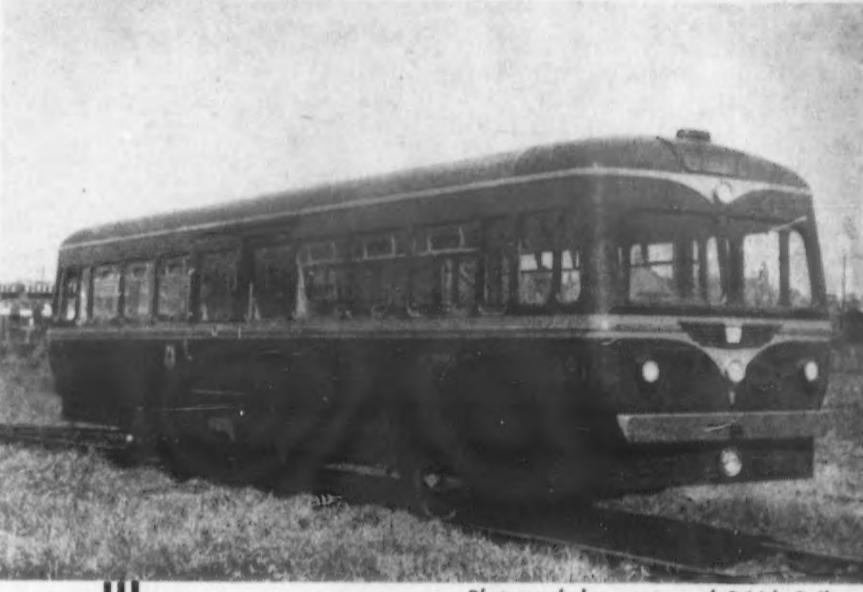
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More Diesel Railbuses for British Railways



Photograph by courtesy of British Railways

One of two diesel railbuses built by Bristol Commercial Vehicles in conjunction with Eastern Coach Works Ltd., recently delivered to British Railways.

The control system was designed by B.C.V. in collaboration with Westinghouse, and

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IMPORTANT CONTRACTS**Paxman-Breda Engines Ordered**

AN order has been placed by the Italian State Railways with Breda Electromecanica e Locomotiva, Milan, for 15 large diesel-electric locomotives to follow two already on order. The locomotives will each be powered by a 1,320 h.p. Paxman 12-cylinder V-type diesel built by Fabbrica Automobili Isotta Fraschini e Motori Breda at Saronno under licence from Davey, Paxman and Co., Limited, Colchester. The manufacturing agreement between Breda and Paxman was only signed three years ago and the two engines in the first order have already been built in Italy and successfully tested.

Vauxhall Motors Export Record

In 1958 the total number of vehicles exported by Vauxhall Motors, Limited, exceeded 100,000 for the first time, the previous highest total having been 84,422 in 1957. Of the vehicles exported last year, over 22,000 were Bedford commercial vehicles.

Self-Change For B.M.M.O.

An order has been placed by the Birmingham and Midland Motor Omnibus Co., Limited, with Self-Changing Gears, Limited, for 100 RV28 four-speed semi-automatic gearboxes and 100 fluid-friction automatic clutches. The units are to be installed in the new Midland "Red" DB integral double-deck buses now in production by B.M.M.O. and have been adopted after extensive trials.

Isolators for B.R. Electrification

The British Transport Commission has ordered a total of 1,707 isolators (hand-operated switches) for overhead line equipment needed for British Railways electrification in the Eastern, London Midland, and Scottish regions. Orders have been placed with Hackbridge and Hewitt Electric Co., Limited (487); Bertram Thomas (Engineers), Ltd. (520); Switchgear and Equipment, Limited (680); and Electric Transmission, Limited (20).

More Perkins Diesels For Argentina

Orders for approximately 1,400 diesel engines have been received by F. Perkins, Limited, from 20 Argentine combine harvester manufacturers through Fevre y Bassett, Limitada, the Peterborough company's distributor in Argentina. The engines are P3, L4, P6 and R6 units, supplied with radiator, clutch and power take-off in the majority of cases. The new orders are about double those placed last year and confirm the successful operation of the 8,000 or so Perkins engines already sold in this very competitive market.

London Midland Region Contracts

The London Midland Region of British Railways announces the following contracts:

Sir Lindsay Parkinson and Co., Limited, London, S.E.1, for new bridge to carry Carnforth and Wennington line over the Lancaster By-pass at Carnforth Bridge for Ministry of Transport. Supervisors, Limited, Sidcup, for installation of ventilation plant, Hunt's Bank and Victoria Station offices, Manchester. Leonard Ward, Limited, A. J. Oxford Road, Manchester.

G. Dent and Co., Limited, Oldham, to renew bridges to carry Liverpool and Manchester line over Stretford-Eccles By-pass between Eccles and Patricroft for Lancashire County Council.

John Booth and Sons (Bolton), Limited, Bolton, for lifting bridges on Crewe-Shrewsbury and Crewe-Stafford lines and demolishing two bridges on Crewe-Stockport line.

S.N.C.F. Electric Locomotives

After having placed an order for 40 type BB16500 electric locomotives with the Alsthom concern at the beginning of December, French National Railways (S.N.C.F.) has now announced the ordering of 25 BB9400 electric locomotives from the French companies Electro-Mécanique Fives-Lille-Cail and Matériel Electrique S.W. A further 35 type BB12000 electric locomotives are on order from Groupe Matériel de Traction Électrique, a joint company of the Creusot, Jeumont and Matériel Électrique S.W. concerns.

TENDERS INVITED

Immediately—Iraq.—Ministry of Defence for 48 30-40 seat BUSES, 34 CARGO EMPTIES, 20 tipping REFUSE COLLECTORS, 100 four-by-four 1-ton LORRIES and 30 six-by-six or six-by-four 10-ton LORRIES. Tenders to the Ministry of Defence, Directorate of Contracts and Purchases, Baghdad. No further information available.

January 8—Union of South Africa.—Tender and Supplies Board for three 9-12 cu. ft. wheeled diesel-engined hydraulic FRONT-END LOADERS. Tenders to the Chairman, Union Tender and Supplies Board, 291 Bosman Street, P.O. Box 371, Pretoria. (ESB/31309/58.)

January 13—Union of South Africa.—Tender and Supplies Board for one 75-h.p. diesel TRACKED TRACTOR with BULLDOZER and three 200-h.p. diesel OSCILLATING-FRAME TRACKED TRACTORS with torque-converter transmission and BULLDOZERS. Tenders to the Chairman, Union Tender and Supplies Board, 291 Bosman Street, Pretoria. (ESB/31310 and 31307/58.)

January 16—Union of South Africa.—South African Railways for one railway BALLAST DISTRIBUTOR to work with side-discharge wagons and on-track tamping machines. Photocopies of tender documents from Export Services Branch, B.O.T., price 9s. (ESB/31264/58.)

January 21—Ethiopia.—Imperial Highway Authority for 18 cwt. petrol-engined PICK-UP TRUCKS. Tenders to the Imperial Highway Authority, P.O. Box 170, Addis Ababa. (ESB/31280/58.)

SHIPPING and SHIPBUILDING**Re-equipment at Colombo**

EQUIPMENT to the value of Rs.10,000,000 is now on order by the Colombo Port Cargo Corporation and is due for delivery at intervals within the next 200 days. Mr. Wijesinghe, Minister of Nationalised Services, announced that orders had been placed for 540 lighters, 12 tugs and 20 launches. All these items were scheduled for delivery within 200 days. The first instalment consists of 18 new lighters which will be delivered in less than 100 days. Although the Corporation needs 500 lighters, it has to be satisfied for the present with 188. Of the 200 lighters it took over from the private operators when the port was nationalised, nearly 100 are in disrepair and are not capable of carrying a full load. Mr. Wijesinghe said that the lighterage position was very precarious and it was one of the chief causes of port delays. The position in regard to tugs and launches was no better, he said. About 50 launches and 30 tugs were needed but there were only 28 and 33.

Cold-Storage Warehouse in Amsterdam
IN Amsterdam, the Blaauwhoed (Bluehat) storage company, owing its name to the colour of the headgear these one-time porters used to wear, has taken over a new cold storage warehouse and deep-freezing plant that can be reckoned to be the largest of its kind in Europe. More than 20,000 cu.m. of space is available for the storage of frozen and semi-frozen products; in addition there is 10,000 cu.m. non-refrigerated space available.

American Mail Line Subsidy

THE American Mail Line of Seattle and the U.S. Federal Maritime Administration have signed a 20-year contract under which the line will replace its fleet at an estimated cost of £35 million and continue to receive government subsidies. American Mail Line operates nine vessels between Pacific north-west ports and the Far East and South-East Asia. Under the newly signed contract, the line will place contracts for replacement ships by January, 1966, with the first three contracts to be placed by June 1, 1959. The first three replacement ships will be 20-knot Mariner class vessels, which have a deadweight capacity of 13,000 tons.

Turbine-Powered Boat Does 40 m.p.h.

A NEW 52-ft. personnel boat powered by dual Solar Jupiter gas turbine engines and featuring a unique high-speed hull design reached speeds of 40 m.p.h. in its first demonstration recently in New Orleans. This is the second commercial example to be powered by dual Solar gas turbine engines. It is designed for rapid transport of personnel to and from the offshore oilfields. Two Jupiter engines deliver 1,000 h.p. through V-drive units which allow the engines to be located at the stern of the boat. Power taken off the forward end of the engines goes into gearbox which have drive shafts angled downward and to the rear of the boat.

Super Tanker Built in U.S.

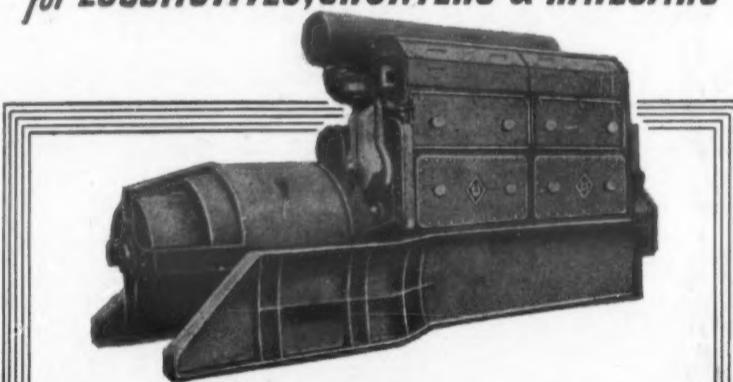
THE largest merchant ship yet built in the Western Hemisphere, the 70,700-ton tanker *Princess Sophie* was launched at the Bethlehem Steel Shipyard at Quincy, Massachusetts, recently. She was christened by Queen Frederika of Greece, after whose eldest daughter the ship is named. It will fly the Greek flag in the Niarhos fleet, operating principally between the Persian Gulf and California. Some of her cargo will be pumped into barges before she can enter eastern U.S. ports, including New York and Philadelphia. A spokesman for the Niarhos organisation claimed that the *Princess Sophie* will deliver oil to California for less than two cents (less than 2d.) per gal.—half the cost of 10 years ago—despite the sharp increase in operating expenses.

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